

Digitized by the Internet Archive  
in 2023 with funding from  
Kahle/Austin Foundation









# AMERICAN ECONOMIC LIFE

*And the Means of Its Improvement*

BY

REXFORD GUY TUGWELL

THOMAS MUNRO

ROY E. STRYKER



NEW YORK  
HARCOURT, BRACE AND COMPANY

COPYRIGHT, 1925, BY  
REXFORD GUY TUGWELL

STATE AND  
ALPHA  
1925

Printed in the U. S. A.

HC106

T818 a2

TO THOSE FRIENDS AND STUDENTS OF OURS WHO  
THOUGHT WE OUGHT TO WRITE IT, THIS BOOK,  
WITH ALL ITS KNOWN INADEQUACIES, IS GIVEN,  
IN THE HOPE THAT THEY MAY FIND IT SOMEHOW  
USEFUL IN THE PLACES THEY IMAGINED FOR IT.

132560





## PREFACE TO THE SECOND EDITION

The first edition of this book was privately printed and used in the spring of 1925 as a text for part of the course called *An Introduction to Contemporary Civilization* in Columbia College. If there had been no course, such as this one is, where the need for a fresh description and setting of problems is a perpetually insistent one, this book might never have been written. Certainly it would not have taken its present form. And very probably three people, all busy with more engaging tasks than that of constructing an elementary text, could not have been persuaded to attempt its writing without the urging of the group of some twenty instructors who have charge of that course, and without their advice and encouragement as the work progressed.

As it stands, therefore, the book is one intended partly to fill a gap in an educational project, though it has grown somewhat beyond the original intention into a text which we hope will prove useful as a general elementary introduction to economics. Perhaps, for this reason, some description of the idea and working of the whole project may be relevant. Some six years ago the faculty of Columbia College, after some hesitation, authorized the departments of History, Philosophy, Government, and Economics to merge the work of the freshman year and to contribute to the making of a new inter-departmental course, to be given five times weekly, which should survey the field of modern social problems and supply an adequate background for its understanding. The hesitation of the faculty and of the departments about entering upon the project arose from the fear that the course would attempt to teach everything and succeed in contributing nothing of real value to the student's experiences. This was a natural fear; but, as it turned out, there never has been any serious criticism of the course on this count since its beginning. This was the result of the getting together of a remarkable group of young men as instructors and of the labor they underwent to make the project a success. The distinction with which they

began was that between casual observation and careful observation. The *survey*, they felt, need not be *superficial*. In order to escape from superficiality, a great generalizing effort to locate the germinal forces of the present was necessary. It was also necessary to show the roots of these forces in the past. That was the civilization they meant to get freshmen to understand; and that was the background they meant to supply.

It was here that they encountered a second sort of criticism. A good many educators, tormented by their own felt inadequacies in their various special fields where they could understand the difficulties—and all educators feel this—doubted whether it would be valuable or even possible for teachers and students to hunt out and come to grips with the *roots* of modern problems. And this has been a real difficulty all along. For this purpose no written history would completely serve. There always would be included masses of material irrelevant to the problems selected as germinal. But the effort was made and, indeed, is still going on. The course has grown, through five successive reworkings of its material, closer and closer to this original notion.<sup>1</sup> But a condition of discovering the needed historical treatment was a complete visioning of the contemporary problems. And so, time after time, fresh efforts have been made to think out the whole present situation of man and to pose the crucial problems he faces. All the instructors, in making this effort, have been tormented by their own limitations as specialists. The temptation to think of a given problem as governmental, economic, psychologic, geographic, or philosophic has been considerable. And it is understandable that not until they had worked long enough at the task of teaching contemporary civilization *as* contemporary civilization, could they begin to slough off their departmental biases and gain a wider and deeper vision. But they progressed toward it and, as they changed, their teaching improved. And not only was this valuable for the one course, it was also valuable to them in their other teaching work. For they began to bring into departmental work the wider orientation of “C. C.” This is a fundamental gain in college teaching, whatever may be said for graduate instruction. We are beginning to envisage the students’ educational enterprise as one not of going

<sup>1</sup> Cf. successive editions of the *Syllabus for Contemporary Civilization*, Columbia University Press.

to this or that specialist for intensive course specialization, but as one of building toward a completer life. We subtly evade educational responsibility by the elective system as it has loosely developed in the American college. Columbia College is finding it again not only in such courses as "C. C." but in other courses that have developed through the stimulus of its example, such as the general course in science and the still more remarkable course in General Honors, devised as a meeting of the College's obligation to its better students, which runs through the junior and senior years.

Very early it was realized that one of the conditions of successful social life for modern peoples was the understanding, the control, and the improvement of the uses of industrial forces. Mr. F. C. Mills of the department of Economics, helped to construct the first edition of the syllabus of the course. It was successfully used and later revised by Mr. W. E. Weld of the department. In 1924, however, a more complete revision than any yet attempted since the beginning, was undertaken, with the whole corps of instructors acting as an executive committee. They felt that by this time they could take a long step toward the fulfillment of the idea that had been rather loosely adhered to before because of the difficulties of de-departmentalizing instructors, so to speak. Then a second difficulty arose that had been bothersome before but that now became serious. The course is conducted by the discussion method, each instructor remaining with his group throughout the year. And in order to make a success of the discussions as day follows day throughout a long year with five sessions a week, adequate and interesting textual material is vital. The responsibility for providing these texts seemed to rest upon people with experience in teaching the course and with the loosened departmental biases that result. The book presented here is one of these attempted texts. It has been used for teaching and has been revised after that experience. That it has grave faults the authors, though they have labored over it, do not doubt. But their apologies are less because their students have seemed to find it interesting and, to them, vital. And that is what was wanted. If it fails to present relevant data from industrial experience or if it, in others' opinions, misinterprets the data, we are at fault, but we have said what seemed to us to be the truth.

We ought to add, too, that we have had in mind not only the

provision of a text for "C. C." but also the need there is for this kind of book apart from the course itself. We may be mistaken, but no book, undertaken in a similar fashion, seems to us wholly adequate. Doubtless ours will seem inadequate too, but not, perhaps, in the same ways. We hope for it, naturally, that it will find its way into the hands of students who are beginning their study of economics and whose teachers feel that this introduction ought not to be made by the studying of principles. In no field has this method of beginning teaching been more widespread and more deadly. It completely reverses the normal method by presenting generalizations first, and ones, at that, which are hardened into abstract laws, neglects almost entirely the description of institutions, and uses practical life only for some few supporting illustrations. We, at least, do not commit these crimes. We attempt to open out the problems of life as material for the creative intelligences of youth, and, mindful of the dangers of conclusive generalization, make ours only tentative and suggested, as it were, for the sake of argument. The economic world is in transition. We try to glimpse the forces that will create the future and to outline the barriers that retard our progress. That is all. We make no claim of originality or of contribution to economic knowledge or thought. We have not written this book for our colleagues but for our own students. If other economists find it useful in their students' hands we shall be glad; if not, we shall be happy, anyway, to have made an attempt to be useful, and shall claim what consideration they may reserve for good intention.

We have certain acknowledgments to make. We have tried to convey them more personally, since the formality of a preface hinders the expression of the genuineness of our gratitude to all also have helped us. But as a secondary way of offering thanks we record them here. First to the group of "C. C." instructors past and present we are most deeply indebted. Those who worked out the original course and taught it first: W. E. Caldwell, H. J. Carman, J. J. Coss, Irwin Edman, A. P. Evans, H. L. Friess, E. D. Graper, A. L. Jones, B. B. Kendrick, S. P. Lamprecht, R. D. Leigh, F. C. Mills, P. T. Moon, and H. W. Schneider. And those who came into it later and carried on: R. C. Atkinson, A. G. Dewey, D. M. Fisk, C. A. Gulick, Jr., James Gutmann, E. B. Hewes, H. B. Howe, J. E. McGee, J. G. McGoldrick, Gail



Kennedy, R. F. Nichols, J. H. Randall, Jr., I. W. Raymond, John Storek, Horace Taylor, A. S. Tostlebe, W. E. Weld, and B. D. Wood. Of these we owe an especial debt to the members of our own department, D. L. Dodd, C. A. Gulick, Jr., Horace Taylor, and A. S. Tostlebe, who have helped with technical criticism and advice; but our debt is scarcely less to others who painstakingly read manuscript and proof, R. F. Nichols, J. G. McGoldrick, and H. J. Carman. Also, of course, to J. J. Coss, who has served throughout as director of the course, we owe a debt that we can only inadequately acknowledge for encouragement and critical appraisal.

Our debt is very great to others also on whose store of knowledge we have drawn: E. E. Agger, R. E. Chaddock, J. R. Smith, W. C. Mitchell, H. R. Seager, R. C. McCrea, W. F. Ogburn, H. L. Moore, R. L. Hale, and E. R. A. Seligman of our own department; J. A. Hobson, L. C. Marshall, Walton H. Hamilton, J. M. Clark, E. A. Kemmerer, H. G. Moulton, Thorstein Veblen, F. A. Fetter, F. W. Taussig, Carl Kelsey, R. H. Lansburgh, E. M. Patterson, Alvin Hansen, David Friday, Carl Snider, F. H. Knight, A. B. Wolfe, S. H. Slichter, G. F. Warren, M. A. Copeland, Henry Clay, P. H. Douglas, A. S. Johnson, and A. W. Calhoun, economists of other institutions. Upon all of these—and many others—we have drawn freely for ideas and for data, sometimes explicitly, but often in ways that cannot be documented because their teachings have become so intimate a part of our mental equipment. Mr. Sinclair Lewis, Mr. Hamlin Garland, Mr. Edmund Wilson, and Mr. Theodore Dreiser, with their publishers, have generously allowed us to use illustrative passages from their works. The *Survey*, the *New York World*, the *New York Times*, and many technical magazines have permitted us to reproduce their illustrative material. We have used the results of many governmental agencies, whose work is invaluable to any economist in our time, drawing illustrations, charts—even quoting—from the *Survey of Current Business* of the Department of Commerce, the *Yearbook* of the Department of Agriculture, the *Monthly Labor Review* of the Department of Labor, and the publications of the Federal Reserve Banks, particularly of the Second or New York District. Many business firms have been generous in supplying us with pictures of their processes. Lewis

W. Hine and Herbert F. Tutt have also given valuable aid in selecting and preparing illustrations to be used in this book.

Our acknowledgment of deepest debt must, however, be made to the work of two great thinkers, one technically an economist, one a philosopher—Simon Nelson Patten and John Dewey—but whose questing minds, refusing departmental classification, have ranged over all the data of human experience. Without their magnificent accomplishments this book would not have been possible. Their thought, we know, penetrates its very fabric.

R. G. T.

T. M.

R. E. S.

COLUMBIA UNIVERSITY,  
June, 1925.

# CONTENTS

## INTRODUCTION

### BOOK I

#### POVERTY, COMFORT, AND RICHES: PRESENT LEVELS OF LIVING

CHAP.	PAGE
1 THE NATURE OF ECONOMIC STANDARDS . . . . .	3
2 RURAL POVERTY . . . . .	8
3 URBAN POVERTY . . . . .	37
4 COMFORT . . . . .	66
5 RICHES . . . . .	97

### BOOK II

#### RAISING THE LEVELS OF LIVING

##### Part I. *Raising the Levels Through Efficient Production*

6 THE MEANING OF "PRODUCTION" AND ITS POSSIBLE RESULTS	109
--	-----

##### Section A. *Rural Productive Efficiency*

7 INCREASING FARM PRODUCTION . . . . .	134
8 INCREASING FARM PRODUCTION (CONT'D) . . . . .	164

##### Section B. *The Remaking of Rural Life*

9 MAKING RURAL LIFE MORE SATISFYING AND BENEFICIAL . . . . .	185
--	-----

##### Section C. *Urban Productive Efficiency*

10 INCREASING PRODUCTION BY MORE EFFECTIVELY USING PHYSICAL SCIENCE . . . . .	199
11 INCREASING PRODUCTION BY MORE EFFECTIVELY USING HUMAN ENERGY . . . . .	229
12 DIRECTING INDUSTRIAL ENERGY TO DESIRED ENDS . . . . .	244
13 BUSINESS ORGANIZATION AND OWNERSHIP . . . . .	259
14 THE TECHNIQUE OF CORPORATE PRODUCTION . . . . .	264

CHAP.	PAGE
15 THE TECHNIQUE OF BUSINESS . . . . .	285
16 INDUSTRIAL COÖRDINATION AND CONTROL . . . . .	302
17 THE RELATION OF THE FINANCIAL ORGANIZATION TO INDUSTRY . . . . .	332

### Section D. *The Remaking of Urban Life*

18 REORGANIZING THE KINDS AND HOURS OF WORK . . . . .	343
19 IMPROVED STANDARDS OF HEALTH, EDUCATION, AND RECREATION . . . . .	369

### Part II. *Raising the Levels of Living Through the Just Apportionment of Income*

20 THE PROBLEM OF THE JUST APPORTIONMENT OF INCOME . . . . .	393
21 WHAT INCOME IS . . . . .	402
22 HOW INCOME IS APPORTIONED . . . . .	406
23 INDIVIDUALS AND GROUPS IN APPORTIONMENT . . . . .	419
24 THE AIMS AND METHODS OF REAPPORTIONMENT . . . . .	430

### Part III. *Raising the Levels of Living by the Rational Use of Income*

25 THE NEED OF RATIONALITY IN THE USE OF INCOME . . . . .	449
26 INDIVIDUAL CHOICES: HOW THEY ARE MADE . . . . .	453
27 INDIVIDUAL CHOICES: WAYS OF IMPROVING THEM . . . . .	463
28 GROUP CHOICES AND USES OF INCOME . . . . .	471

### Part IV. *Raising the Levels of Living Through Comprehensive Schemes for Reorganization*

29 RELATIONS BETWEEN ECONOMIC, SOCIAL, AND POLITICAL CONDITIONS . . . . .	495
30 INDIVIDUALISM . . . . .	498
31 COLLECTIVE BARGAINING . . . . .	509
32 THE COÖPERATIVE MOVEMENT . . . . .	523
33 GOVERNMENT OWNERSHIP . . . . .	548
34 SOCIALISM . . . . .	559
35 SYNDICALISM, GUILD SOCIALISM, AND THE MODIFICATION OF SCHEMES IN EXPERIENCE . . . . .	571

### Part V. *Conclusion*

36 TOWARD AN EXPERIMENTAL ECONOMICS . . . . .	587
SUMMARY AND OUTLINE . . . . .	597
INDEX . . . . .	623



BOOK I

POVERTY, COMFORT, AND RICHES  
PRESENT LEVELS OF LIVING

to it, are made by the social group of which he is a member; the fortunes of all of us are largely bound up together. Therefore it is useful to consider the ways and means by which a social group may improve its economic conditions. The most successful way, for the time being, as we have said, is often to take the wealth of some other group. With these tactics, effective as they may be, we are not so much concerned, though we shall have to deal with them where they affect the wider economic life. We are interested more vitally in the slow and peaceful climbing of modern social groups to higher economic levels, through coöperation and exchange.

## 2. *Economic Theory and Practice*

This has been the object, directly or indirectly, of most economic study since Adam Smith's *Wealth of Nations* was published in 1776; but there are many different ways of pursuing it. The majority of economists relegate to the background the question of practical improvement, and devote themselves to discovering and analyzing the ways in which economic forces work; how the parts of industrial society fit together and interact; how certain items of wealth are desired and produced; how prices rise and fall; and how a change in one factor, such as paper money, will affect other factors. To some extent, these facts must be discovered before workable schemes of improvement can be mapped out; but the quest for them often leads into meaningless and intricate statistical mazes, or into vague theoretical bypaths which arrive at no practical conclusion. In the meantime, industrial society must move along; legislatures and business executives must be deciding policies while the scientists debate.

In spite of the doubtful points, enough facts are known to make intelligent decisions possible. There are many obvious needs which are obscured by too much theorizing. We shall not linger long over disputed questions of detail, therefore, but examine the ways and means of economic progress in their broadest outlines, bringing forward what knowledge is available and strictly relevant to practical policy and briefly comparing theories in disputed matters of importance. We shall not hesitate to advance opinions on such matters, in the hope that they will stimulate discussion, rather than end it. Many economic writings have been expressly devoted to practical reform, but of these a large part have advo-

cated sweeping changes in society. They are often valuable as ideals, even when impossible of attainment in the present; and often they have been urged with a passionate intensity which has awakened people to the existence of long-tolerated evils in the social system.

In a final section we shall consider some of the most important of these schemes as they bear upon particular issues. But many of them are impracticable and confusing because they assume an inaccurate foundation in actual facts and in the necessary intermediate steps between the present and Utopia. We shall not attempt the impossible task of outlining a perfect economic order of our own imagining but will rather confine our efforts to dealing with the situation piecemeal, reviewing some of the present conditions which most obviously call for improvement; and some of the suggested methods for improving them.

### 3. *Difference in Standards*

The first step is to form a fairly specific idea of what needs to be done. For this we do not have to look into any imaginary future, but merely to compare the circumstances of various people at the present time. For some people have already reached what amounts, practically speaking, to an economically perfect situation; they may not use their opportunities properly, but they do at least possess the possibility of happiness and achievement beyond the limits of most people's imagination. What needs to be done, then, is to bring others up as near as possible to this level of opportunity. That the great majority now fall short we all know, but we often fail to realize how much they fall short, and how disastrously the lack of opportunity affects their lives. Before going on to discuss ways and means of improvement, it will therefore be advisable to view the present state of things as clearly as possible; to see what poverty, riches, and moderate comfort actually mean in terms of the quality of living; in other words, to realize the difference between the various economic levels in America today.

### 4. *Ways of Measuring Standards*

A moment's thought discloses that the words "poverty" and "riches" mean different things at different times and places. What is called "poverty" in New York today might well seem a

dream of luxury to the Armenian refugee, and certainly would have seemed so to the serf of medieval Europe. A man is judged to be poor or rich by comparison with the prevailing standards of his group, by the fact that he possesses less or more than is usual there. In a certain group, conditions may be such that little wealth is possessed by individuals, or needed. Thus a nomadic tribe, wandering in a plentiful country with little or no private property, could hardly be judged as poor by the test of money incomes prevailing in New York. To make our terms fairly concrete, then, we shall restrict them to conditions in the United States at the present time. Concerning ways and means of improvement, too, we shall also limit ourselves fairly closely to what is practical here and now, although much of what is said will apply to other times and places as well.

We have already noticed that money alone, or even the value of goods possessed, is often a misleading measure of the standard of living when this phrase is understood in its broader and truer sense. One man may feel himself rich with next to nothing as Thoreau did in his cottage at Walden. He has enough to suit his simple tastes; and so employs his few possessions as to achieve a high level of culture and happiness. Another may, like Silas Marner, hoard his wealth and live penuriously. Still another may persist, through sheer force of habit, in grinding toil after he has made his fortune. And many men have achieved their riches only by their own physical and mental ruin.

How wealth is used, then, may prove sometimes to be a more important consideration in producing a really high standard than the amount of wealth possessed; and we shall certainly consider it among the ways of raising the levels of living. But notwithstanding these exceptions, there remains a fairly general correspondence, within the same group, between income and activities, between economic strata and degrees of opportunity for health, culture, and freedom from the fear of want. So we may safely differentiate our standards primarily by the use of a measure in money income. We shall classify people on the basis of their levels of affluence, as indicated by their incomes and expenditures. At the same time we shall examine some of the physical and mental conditions and activities that are usually associated with these economic levels.



## QUESTIONS FOR THE GUIDANCE OF STUDY

1. Is wealth a means to progress? How can it make a contribution?
2. Are people right in considering it important to organize economic activities so that wealth is increased?
3. What other considerations are significant in this process of increasing wealth?
4. Why ought the study of economic life to keep to the social rather than the individual point of view?
5. Is there anything fixed about standards of economic life? How may they be measured?
6. From the outline of the book and the discussion of Chapter 1, what seem to be the authors' notions of the general means of raising the levels of living?

## CHAPTER 2

### RURAL POVERTY

#### 1. *Unpleasant Facts*

The lowest plane of economic existence is the poverty level, where the mere preservation of life is a difficult task, where starvation and disease are always close at hand, forcing almost every ounce of energy into the struggle to escape them. Suffering is keen for the poor alike in country and in city; but it is of somewhat



Rural Poverty. (Milbank Memorial Fund. Photo Hine)

different kinds, and arises from different causes. So we shall consider as types both the family of a struggling farmer on inadequate soil, and that of a factory worker existing on low wages. What do they do, and what things must they do without?

No cold analysis in general terms and no statistical description can hope to bring home the meaning of poverty to one who has not seen it. It has been the common doom of millions of men. It

is the most ancient of tragedies. And as we should expect, literature has always had it for a theme. Modern fiction is no exception and there are to be found in it many vivid pictures of what poverty does to people of every type of character and aspiration, even in the most advanced and prosperous of countries. Dickens' stories of the London slums, though often oversentimentalized, are filled with true presentments of conditions that still exist; Dostoevsky, Turgenev, Chekhov, and Gorky make us feel sharply the gaunt misery of the Russian peasant and the hopeless despair of the city slum-dweller. The fact that our own novelists, for the most part, still prefer to write pleasant romances, rather than to reveal actual life, is not a sign that poverty has disappeared in America. Starvation and suicide from want still occur with significant frequency in our newspaper reports; and investigators provide us with endless statistics on disease and early death from malnutrition and unhealthful work. Those who know the poor, and only they, can really sense the haunting miseries of the long, undramatic struggle to keep large families alive on pitiful incomes. These are unpleasant facts which we do not care to read about or to think of; in fact, it is often supposed to be more patriotic to deny that they exist, or to attribute them to the fault of the poor themselves. So we hear in speeches and newspaper editorials that only the lazy and stupid remain poor in this land of glorious opportunity, or that "the other" political party is responsible for hard times. We turn with relief to more cheerful topics, living in a dream-world of perfection, or obscuring the problem with false explanations, and thus delay real progress toward national prosperity. To compel a thorough realization of the facts, the pen of some new poet, novelist, or reformer is perhaps necessary, but there is much cogency in bald facts as well, and a little imagination suffices to relate them to human experience.

For the most part we must depend upon bald facts in such a book as this, but a useful purpose may very well be served by another kind of description. Our writers have not altogether overlooked poverty as a theme, though the instances in which poverty—and especially the poverty of rural life with which we are first concerned here—has formed the background of imaginative literature are remarkably few. Among them no one has pictured more vividly than Mr. Hamlin Garland the trials of rural life with

the limited working and living facilities of pioneer times and of the farmer on the poverty level at present. Perhaps there is no more vivid illustration possible than certain passages from one of his great trilogy of books *Main Travelled Roads*, *A Son of the Middle Border*, and *A Daughter of the Middle Border*. The following passage is from an early chapter of his *Son of the Middle Border*.<sup>1</sup> It illustrates not only some of the hardships of farm life but the impotence of humans in the grip of the natural forces with which farmers continually have to contend:

One of my duties, and one that I dreaded, was pumping water for our herd. This was no light job, especially on a stinging windy morning, for the cows, having only dry fodder, required an enormous amount of liquid, and as they could only drink while the water was fresh from the well, some one must work the handle till the last calf had absorbed his fill—and this had to be done when the thermometer was thirty below, just the same as at any other time. . . .

Some farms had ponds or streams to which their flocks were driven for water but this to me was a melancholy winter function, and sometimes as I joined Burt or Cyrus in driving the poor humped and shivering beasts down over the snowy plain to a hole chopped in the ice, and watched them lay their aching teeth to the frigid draught, trying a dozen times to temper their mouths to the chill, I suffered with them. As they streamed along homeward, heavy with their sloshing load, they seemed the personification of a desolate and abused race.

Winter mornings were a time of trial for us all. It required stern military command to get us out of bed before daylight, in a chamber warmed only by the stovepipe, to draw on icy socks and frosty boots and go to the milking of cows and the currying of horses. . . .

It ought not to surprise the reader when I say that my morning toilet was hasty—something less than a “lick and a promise.” I couldn’t (or didn’t) stop to wash my face or comb my hair; such refinements seem useless in an attic bedchamber at five in the morning of a December day—I put them off till breakfast time. Getting up at five A. M. even in June was a hardship, in winter it was a punishment. . . .

Then came the fanning mill. The seed grain had to be fanned up, and that was a dark and dusty “trick” which we did not like anything near as well as we did skating or even piling wood. The hired man turned the mill, I dipped the wheat into the hopper, Franklin held sacks and father scooped the grain in. I don’t suppose we gave up many hours to this work, but it seems to me that we spent weeks at it. Probably we took spells at the mill in the midst of the work on the chip pile.

Meanwhile, above our heads the wild ducks again pursued their northward flight, and the far honking of the geese fell to our ears from the

<sup>1</sup> The Macmillan Company, 1922. Quoted by permission.

solemn deeps of the windless night. On the first dry prairie cocks began to boom, and then at last came the imperious voice rang high in familiar command. "Out with the boys! We start seeding tomorrow." edges the drags,

Again we went forth on the land, this time to wrestle with the tough, unrotted sod of the new breaking, while all around us the larks and plover called and the gray badgers stared with disapproving bitterness from their ravaged hills.

Maledictions on that tough northwest forty! How many times I harrowed and cross-harrowed it I cannot say, but I well remember the maddening persistency with which the masses of hazel roots clogged the teeth of the drag, making it necessary for me to raise the corner of it—a million times a day! This had to be done while the team was in motion, and you can see I did not lack for exercise. It was necessary also to "lap-half" and this requirement made careful driving needful for father could not be fooled. He saw every "balk."

As the ground dried off, the dust arose from under the teeth of the harrow and flew so thickly that my face was not only coated with it but tears of rebellious rage stained my cheeks with comic lines. At such times it seemed unprofitable to be the twelve-year-old son of a western farmer.

One day, just as the early sown wheat was beginning to throw a tinge of green over the brown earth, a tremendous wind arose from the southwest and blew with such devastating fury that the soil, caught up from the field, formed a cloud, hundreds of feet high—a cloud which darkened the sky, turning noon into dusk and sending us all to shelter. All the forenoon this blizzard of loam raged, filling the house with dust, almost smothering the cattle in the stable. Work was impossible, even for the men. The growing grain, its roots exposed to the air, withered and died. Many of the smaller plants were carried bodily away.

As the day wore on father fell into dumb, despairing rage. His rigid face and smoldering eyes, his grim lips, terrified us all. It seemed to him (as to us) that the entire farm was about to take flight, and the bitterest part of the tragic circumstance lay in the reflection that our loss (which was much greater than any of our neighbors') was due to the extra care with which we had pulverized the ground.

"If only I hadn't gone over it that last time," I heard him groan in reference to the "smooch" with which I had crushed all the lumps making every acre friable as a garden. "Look at Woodring's!"

Sure enough. The cloud was thinner over on Woodring's side of the line fence. His rough clods were hardly touched. My father's bitter revolt, his impotent fury appalled me, for it seemed to me (as to him) that nature was, at the moment, an enemy. More than seventy acres of this land had to be resown.

Most authors in writing of "the merry, merry farmer" leave out experiences like this—they omit the mud and the dust and the grime, they forget the army worm, the flies, the heat, as well as the smells and drudgery of the barns. Milking the cows is spoken of in the traditional fashion



## PRESENT LEVELS OF LIVING

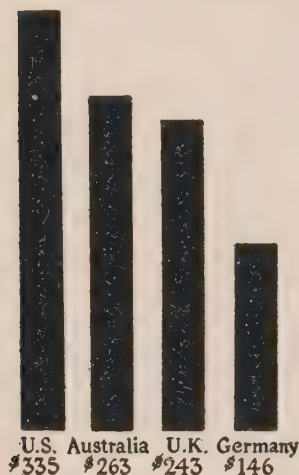
12

pastoral recreation, when as a matter of fact it is a tedious job. We all hated it. We saw no poetry in it. We hated it in summer when the mosquitoes bit and the cows slashed us with their tails, and we hated it still more in the winter time when they stood in crowded malodorous stalls.

In summer when the flies were particularly savage we had a way of jamming our heads into the cows' flanks to prevent them from kicking into the pail, and sometimes we tied their tails to their legs so that they could not lash our ears. Humboldt Bunn tied a heifer's tail to his boot straps once—and regretted it almost instantly.—No, no, it won't do to talk to me of the "sweet breath of kine." I know them too well—and calves are not "the lovely, fawnlike creatures" they are supposed to be. To the boy who is teaching them to drink out of a pail they are nasty

brutes—quite unlike fawns. They have a way of filling their nostrils with milk and blowing it all over their nurse. They are greedy, noisy, ill-smelling, and stupid. They look well when running with their mothers in the pasture, but as soon as they are weaned they lose all their charm—for me.

Attendance on swine was less humiliating for the reason that we could keep them at arm's length, but we didn't enjoy that. We liked teaming and pitching hay and harvesting and making fence, and we did not greatly resent plowing or husking corn but we did hate the smell, the filth of the cowyard. Even hostling had its "outs," especially in spring when the horses were shedding their hair. I never fully enjoyed the taste of equine dandruff, and the eternal smell of manure irked me, especially at the table. . . .



This chart shows the relative wealth per capita in the United States and other countries in 1918. (Based on Bureau of Economic Research statistics)

Pessimism can of course be overdone, and there is no harm in reminding oneself that the wealth of the United States as a whole has increased steadily and enormously in recent years; and that by intelligent handling we can increase it even more rapidly.<sup>1</sup> By contrast with nations more heavily burdened by the recent Great War, we may certainly consider ourselves well off. But the millennium is not yet reached. We still have an acute problem of poverty that challenges solution first, of all the problems of life.

<sup>1</sup> Cf. below, chapters on production, Part I of Book II.

And the poverty of rural life is quite as striking in its social effects as is the poverty of the cities, though in rural life there are compensations, as we shall see a little later, that are not possible in cities. Mr. Garland wrote primarily of the pioneer conditions that, somewhat modified, are still a feature of many of our farmers' existences. But he was writing of early generations that had not had their best stock drained away into the cities and where the deadly secondary effects of hardship and monotony had not yet been felt. A somewhat different aspect of rural poverty, its later implications of slack intelligence and devastating moral and æsthetic narrowness, are emphasized in a short narrative by Mr. Edmund Wilson<sup>1</sup> of the life of a woman who finally became a shopkeeper in Greenwich Village, New York.

I went down to Oklahoma where my father was—my father is a doctor—I don't know if he ever knew how to give anything but calomel but he certainly gave plenty of that—and the whole community down there got to be practically dependent on him—he learned by experimenting on them, too. That was in Eagletown, which is halfway between Broken Bow, Oklahoma, and Dequeen, Arkansas—that's a district they call the Sticks because there's so much timber there. The country is really beautiful, they have all these yellow pines and what they call ironwood that turns first brown and then yellow and sort of a henna-colored soil—but the people don't do anything with it. Where we were, the Choctaw Lumber Company had come in and put them to work—somebody has to do something with them—they'd just set and rock, otherwise. Each family owns a cow and if they're ambitious they have a "hawg" and they'd let it go at that. I tell you, you have to go down and live among them to believe that there are such people! They won't talk—all you can get out of them is "yes" and "no" and "Ah reckon." But they watch everything you do—the first morning I was there all the women hung around and watched me get washed. You ought to have seen their faces when they saw some of the things I did—they thought I was outlandish—they didn't have to do that, see! And when I brushed my teeth! They couldn't make out what it was. They don't have any toothbrushes down there—they use snuff-sticks instead. And the women would watch me from the house across the street when I got undressed at night. The only way they know to amuse themselves is to play craps—that's their diversion. My father had a mechanical piano brought down to try to entertain them and you ought to have seen the crowd around the house every night—they just stood there and stared with their mouths open. They'd never heard any music before—only just these old fiddles they have.

<sup>1</sup> "The Road to Greenwich Village," *The New Republic*, xlii, p. 216 (April 15, 1925).

They played it every night for a month and I couldn't stand it any longer finally. I walked out one night and said, "Golly! I can't stand this tinned music any more!" They looked at me real sore and said, "Didja ever hear any better?" Later on, they had pictures there—in the same room that was the school and the church—but most of the older people didn't go—that was kind of new, see. I used to go and see films of New York and it would make me just wild to go there. I got in wrong with them all around—in the first place, I didn't make my boy go to church and they're all very moral—or claim to be. And they couldn't understand why I read books—if they saw me reading a book, they'd put me through a regular cross-examination—they'd want to know what it was and why I wanted to read it. They didn't even read the Bible—they figured they wouldn't know about it. I read Darwin and some of Haeckel down there that my father had and *The Wandering Jew*, by Eugene Sue—now I like to read D. H. Lawrence and Michael Arlen. And then another thing I did they didn't like was to speak to niggers I knew in the street—you're not supposed to do that—it's as much as your life is worth to speak to a nigger. I used to go out for long walks with a book and that made them very suspicious—they wanted to know why I wanted to go out for a walk alone.

Any one who knows the rural life of much of the indefinite border hill country between the North and the South will recognize the picture just drawn as a true one. It is perhaps—even, indeed probably—overdrawn if it is used as a generalization concerning life lived on the poverty level in rural districts everywhere. But many of its features are true of communities in every part of the country where unfortunate circumstances of soil or climate have kept progress from occurring. In the Jersey pine-barrens, in the hills away from the fertile valleys of New York, Ohio, and Indiana—in many other places too, similarly situated—the same hopeless degradation will be found.

## 2. *Deprivations and the Struggle for Necessities in Rural Life*

The best way to understand rural poverty is perhaps to imagine in detail what it would mean to man to do without most of the things that make life worth living. What are generally called luxuries are of course unthinkable—theaters, concerts, fine clothes and food, beautiful houses and works of art, travel and the stimulating contact with minds different from one's own, the chance to discover congenial friends—all the finer developments of the art of living. The poor family in the country is often isolated in a thinly settled region where roads and neighbors are few. Because

conveyances are expensive, it stays at home. Incessant contact among the same few people breeds monotony, boredom, and suppressed hatred; there are consequently no outlets for innate sociability, no convivial gatherings of friends and casual acquaintances. If there are neighbors, they carry the same burdens and are limited by the same disabilities in obtaining any opportunity for mental development. Social contact among neighbors on greatly different financial levels is difficult for obvious reasons. Higher education for the children is practically impossible, for, even though tuition is free and the student might thinkably support himself, the



An isolated region—where roads are poor and neighbors few.

family at home requires every pair of hands from the earliest possible age in its struggle against starvation. Furthermore, the encouragement, the initial contact with better things that might inspire a boy to make superhuman efforts, is usually lacking. Optimists who preach that America is a land of equal opportunity, where any one with energy and brains can rise, forget that poverty tends to destroy these very qualities in childhood, and even to create a weak and diseased constitution from birth.

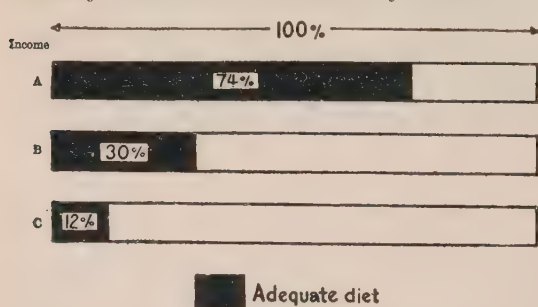
### 3. *Unwholesome Food*

For not only the finer developments of life are blighted, but the roots themselves, which are physical and mental health, are almost inevitably destroyed. Food is almost certain to be poor in quality and limited in variety, a few coarse items endlessly repeated.



Locally grown foods cannot be supplemented by expensive articles imported from other regions. Refrigeration is difficult at all times in the South, and next to impossible in summer everywhere, a fact which tends to restrict diet to dried, canned, and salted articles which are slow to spoil; and sometimes to the consumption of stale and half-decayed meats. Ignorance prevents proper cooking and wholesome combination, so that starchy and greasy foods, such as potatoes, corn bread, heavy pastry, and the fat and fibrous cuts of beef and pork predominate. Among the very poor even these staples are hard to get, and the diet becomes irregular as well as ill-balanced. Scraps of low nutritive value must be made to go as far as possible, to take the edge off the keenest hunger. The drinking water is often contaminated, and consequently productive of typhoid fever and other dangerous filth diseases.

As might be expected, investigations of the diet of children in country regions show a direct relation between income and adequacy of diet. We may instance, as an illustration, the figures recently obtained in a Kentucky mountain bluegrass county, of



average farming quality. The farms in the county ranged from good to poor, and the families were divided into three income groups for purposes of study. Group A includes those whose ability to provide adequate food, shelter, and clothing

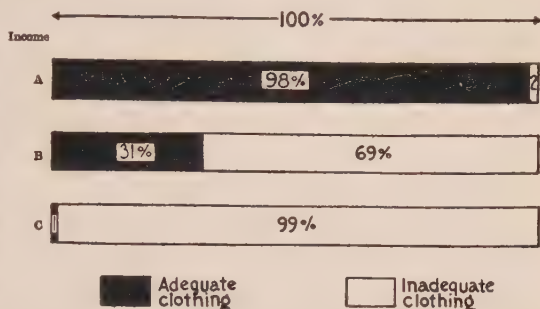
Inadequate nourishment goes with low income. (From Bureau Publication No. 110, Children's Bureau of U.S. Dept. of Labor)

could not be doubted; Group B includes those less certainly able to provide for themselves, and Group C those unquestionably poor. Two hundred and fifty-six children, between two and eleven years of age, were examined for indications of inadequate diet. The results are shown in the accompanying diagram.<sup>1</sup>

<sup>1</sup> *The Nutrition and Care of Children in a Mountain County of Kentucky.* 1922. Children's Bureau of the U.S. Dept. of Labor. Bureau Publication No. 110, p. 30.

#### 4. *Inadequate Clothing*

Flimsy and insufficient clothing still further saps the vital energy. The woolen coats and furs of the rich, the thick-soled shoes that keep out cold and damp, are out of reach. Shoddy substitutes, worn until they fall to pieces, are the characteristic protection of the poor against the weather to which they are continually exposed. In the report just mentioned, the Kentucky mountain



Inadequate clothing goes with low income. (From Bureau Publication No. 110, Children's Bureau of U. S. Dept. of Labor)

children were found to suffer even more from inadequate clothing than from inadequate food when there existed a shortage in income.<sup>1</sup>

#### 5. *Housing Evils*

Houses of the rural poor are characteristically ramshackle and leaky, affording scant protection against winter winds and snows, and against the dampness and malarial insects of summer. In some sections they are pieced together from a few rough boards or logs with many knot-holes and cracks; elsewhere, especially on the western prairies, they are built of sods piled up into walls, or are merely caves dug out in the side of a hill, the openings covered with sods and sticks. If the land about is fairly prosperous and has been settled a few years, one can usually see arising not far from these squalid hovels a self-respecting cottage of smooth and well-matched clapboards, the product of a neighboring sawmill. But the traveler in remote districts of the mountain and prairie still finds these marks of progress discouragingly scarce.

Even congestion, darkness and lack of ventilation, which are usually thought to be evils of the city slum, are prevalent among the rural poor. Scarcity of building materials, inadequacy of heating facilities, and ignorance of the laws of hygiene, induce the

<sup>1</sup> *Ibid.*, p. 37.

family to huddle together in one or two rooms, for cooking, eating and sleeping. In a government report on a rural county in Montana appear the following typical remarks:

"Small and crowded houses are the rule rather than the exception in the area studied; and this despite the fact that the majority of the people have high standards in regard to housing and sanitation. The scarcity of lumber and the difficulty of getting building materials, the dearth of masons and carpenters, the great distances from railroads and markets, the high cost of transportation, the lack of ready money, and the pioneer attitude that to 'do without'



A western "tar paper" shack—a poor protection against winter cold or summer heat.

things is a part of the homesteader's lot—these factors combine to explain the small house and the inevitable crowding."<sup>1</sup>

These are the wretched substitutes for buildings used as homes in

the section investigated: "In the breaks (land broken up by rivers and creeks) nearly every one lived in a log house. Elsewhere, the prevailing types were divided about evenly among the dugout, the tar-paper shack (a light frame structure covered with tar paper to keep the wind out), the sod house (made by cutting oblong chunks of sod and piling them on top of one another to form the walls), and the gumbo houses (made of the fine gumbo clay so common in the area and much like the adobe houses found farther south).

"There were some houses made of stone, which in some instances had been quarried from the buttes on the homestead; and a few

<sup>1</sup> Viola L. Paradise, *Maternity Care and the Welfare of Young Children in a Homesteading County in Montana*. Children's Bureau of the U. S. Department of Labor, Bureau Publication 34, p. 61. Cf. also in this connection many other publications of the bureau such as *Child Labor and the Work of Mothers in the Beet Fields of Colorado and Michigan*. *The Working Children of Boston*, *Child Labor in North Dakota*, *The Welfare of Children in Bituminous Coal Mining Communities in West Virginia*, etc. Also the *Monthly Labor Review* of the Bureau of Labor Statistics, Department of Labor, and the *Labor Legislation Review*.



frame houses of the type common to the farms of the Middle West—plastered and ceiled inside and probably more comfortable than the other types, though not nearly so attractive in appearance. Often a house would combine several styles—would be part dug-out, part sod, and part log; or a combination of stone and dugout; or part sod and part tar-paper shack.”

#### 6. *Unsanitary Conditions*

A physique undermined by unwholesome food and weakened by the exposure inevitable wherever clothing is inadequate and



Lack of sanitary drainage is one of the prevalent evils in rural communities.  
(Courtesy Playground and Recreation Association of America)

housing is poorly provided is not one of great resisting power against disease. But homes where the conditions just described exist are apt to be made still more dangerous by the existence of actual germ-producing conditions near by. Among the most prevalent evils of this sort in rural communities is the lack of sanitary drainage. Anything approaching modern plumbing is, of course, unthinkable in remote rural sections, but methods do exist whereby even in a country district sewage can be disposed of adequately and a cleanly environment produced. Investigators in several sections of the country, however, have disclosed the existence of lamentably inadequate methods for drainage, and a consequent prevalence of many disease-producing germs.

According to a Children's Bureau report on conditions in Georgia: "The general lack of toilets of any kind in the area indicated widespread ignorance of the essential principles of home sanitation. The rural residents of the mountain county, like those in many districts of the rural South, have not learned the dangers of soil pollution." In Montana also similar conditions were found to exist: "Unfortunately even adequate screening does not insure freedom from flies. Where there are children running into and out of the house, the screen door is only a slight protection. Moreover, when a house is poorly constructed, or in the case of log houses, when the mud chinking falls out, flies enter through the cracks. Some houses, immaculately clean and well screened, were infested with flies. In the homes which were not screened, the flies during the hot summer were a great and constant nuisance. The infrequency of sinks aggravates the fly problem, for many of the women throw the waste water out of their doors. The unscreened homes have other intruders to contend with besides flies. In warm weather, when windows and doors must be kept open, the chickens and pigs avail themselves of the housewife's unwilling hospitality and in spite of much shooing and chasing make themselves quite at home, especially on the sod floors."

To trace the causes of such unhealthy conditions is itself a problem. One cannot, of course, attribute it directly to lack of money, for a very moderate amount of effort properly expended would in many cases correct the situation. There is, of course, in the prairie districts a lack of lumber for building of houses; then too high winds often sweep them away. In the dryer parts of the country there is a lack of rivers to carry away drainage. But indirectly poverty is the cause of ignorance as well as of lack of time and energy to cope with these conditions. If the farmer had any way of learning the dangers of faulty drainage and of simple methods of constructing cesspools and sewers he might be stimulated to do so. If the insistent demands of farm and housework allowed him time to expend upon problems which do not seem immediately pressing, he might of his own accord discover adequate methods. Meanwhile, the evils exist and are widespread. As results of faulty drainage, there arise several diseases directly attributable to germs, especially typhoid, which is carried by flies, and malaria, which is carried by mosquitoes bred in stagnant water.

Especially dangerous is the fact that drinking water must usually be obtained from sources close to deposits of sewage. Such pollution usually occurs underground so that it is not directly observable. A heavy rain or slow, natural seepage will carry germs, especially from a high part of ground to the source of the family's drinking water, even at a distance of many yards. The water, when it appears, may be clear and good tasting, and yet laden with germs.

### 7. *Lack of Medical Facilities*

When diseases arise, as they must under such conditions, the family in a secluded region is usually far from any doctor and totally unequipped with adequate medicines or equipment for nursing. Hospitals, of course, are far away. Willing neighbors usually coöperate and do the best they can with homemade remedies, but to call a physician might be out of the question.

In the first place, there is usually an inadequate number of physicians to attend to the population, since the country doctor's life is arduous in the extreme, and he is poorly paid. At the time of a recent survey in Georgia there were only seven physicians in the county studied, to attend to 12,000 people. Thus, each physician was intrusted with the health of about 1700 persons, as compared with 726 persons per physician for the United States as a whole.

Still more serious are the conditions of travel, which prevent a physician from reaching a family in many cases until it is too late. A family on the poverty level is not apt to send for a physician except in extreme emergencies or when an illness has assumed alarming proportions. It is then necessary, perhaps, to ride or drive for many miles over rough and perhaps impassable roads flooded with rains and melting snows, in order to reach a medical man who may be away on another visit when the messenger arrives. Then the laborious road must be retraced; in the meantime the patient is suffering.

The following story of the difficulty of securing medical attention under such conditions is one of many related to the investigators in Georgia:

"A bad winter storm had set in when a young wife of seventeen, expecting her first baby, realized that the child was about to be

born. The father started on horseback for the nearest physician, eight miles distant, and was able to reach his office, but the doctor could not use his car on the roads and feared to attempt a horseback ride over the slippery roads and across creeks jammed with drifting ice. The father returned home alone and found the mother in labor. He then went over a high mountain to secure the services of a very old woman who practiced midwifery. She returned with him through the storm, riding behind him on his horse. Although covering but a few miles, the route led over one of the highest and most difficult ridges of the county.

"When it was found that the doctor, who had promised to come in the morning, had not arrived, a further attempt to secure him was made by the grandfather, who went on muleback. The doctor finally undertook the trip in a buggy but did not arrive at the mountain home until afternoon, seven hours after the baby was born."

The inaccessibility of medical care in confinement cases has been stressed by many observers as one of the most serious difficulties from a social point of view. Even though a country district may be unusually healthy and careful, there is always the certainty that there will be accidents and confinement cases in a certain amount during the year.

Practically all rural investigations reveal the utter inadequacy of facilities for attending to these cases. In an area of 5500 square miles in Montana, there was not a single hospital and only three registered physicians. Less than one-third of the mothers lived within ten miles of a physician and more than one-third were twenty miles or more away, ten of these being from fifty to one hundred miles from a physician.

As an inevitable result of this lack of medical attention there is a high rate of maternal mortality.

During the five years covered by the Children's Bureau survey there were 628 live births in the district, and eight mothers died from diseases of pregnancy or confinement. In other words, the "cost" in maternal deaths for this number of live-born infants was 12.7 per 1000. The corresponding maternal mortality rate for the United States birth-registration area in 1915 was 6.6,<sup>1</sup> a

<sup>1</sup> Computed from figures for the birth registration area of 1915. U. S. Bureau of the Census, *Birth Statistics*, 1915, p. 10; and *Mortality Statistics*, 1915, pp. 298-303.



rate only about half as high as that of the Montana area studied. And this rate for the United States birth-registration area is higher than the rate of any one of fifteen foreign countries for which the figures for the year 1910 were obtained.

The death rate not only of mothers but of infants shows a noticeable excess in those rural districts where medical care is inadequate. "Preventive medicine has shown that a large proportion of still-births and deaths in early infancy can be prevented by providing for the infant and mother adequate care before, during, and after childbirth. Some of the infant deaths in the area could probably have been prevented if the safeguards approved by modern science had been available."

#### 8. *Woman's Work at Home and Afield*

The amount and quality of work done by women in the country varies somewhat in accordance with the traditions of nationalities and other groups. In general, American-born husbands feel a social stigma attached to allowing their wives to do hard labor in the fields. But among immigrant families of European peasants, it is no uncommon sight to see women engaged in practically all the most arduous farm tasks, even to the extent, sometimes, of helping to pull the plow or cultivator. Even though there exists some amount of pride which releases the mother from such strenuous tasks, there is never a lack of work to keep her busy, as the tradition goes, "from sunup to sundown." The sort of work she must do, too, is monotonous and unsystematized, and is of course without any restrictions of hours or any specific wage. It is difficult to measure its amount or its consequences. One needs only to see the rapid change that comes over the face and manner of a country girl within a few years after her marriage, to imagine the life which is implied in the management of a poorly equipped rural home. Rising perhaps before dawn in the bitter cold, she must make fires, attend to part of the farm animals, and get breakfast for a hungry family of laborers. The household tasks alone are sufficient to stoop her shoulders. And her face must cloud with worry at the sight of children who are growing up without the means of health and happiness. Even when her duties are limited to the house, nightfall discovers her unspeakably weary, yet still busy with a hundred petty tasks. But a rural family must be well

on the way to prosperity before it can spare a woman entirely from assisting in farm labor during emergencies in the harvesting seasons, so that back-breaking labor in the fields, in addition to all her household tasks, is often the lot of the woman of the rural poverty level.

"Marriage and motherhood come early to the mountain girl and large families are the rule. Three-fifths of the mothers included in this [Georgia] study were married before they were twenty years of age. Sixty-one became wives before they were sixteen, and nine before they were fourteen years old. Child-bearing at frequent intervals is the rule among mountain women.

Of the mothers who were married ten years or more, forty-four per cent have had eight or more pregnancies."



"Man works from sun to sun;  
woman's work is never done."  
(Courtesy *The Survey*)

Possessing, usually, no means of limiting the size of her family, she must endure frequent childbirth as a part of the inevitable destiny of her sex. Moreover, in spite of the certain expense and difficulty of raising children, the farmer looks forward to the day when a group of sturdy sons will be able to help him dominate the stubborn soil. The bearing and raising of a large family, therefore, is regarded not

only as inevitable but as a woman's duty toward her husband. When the children have come, it is she who must find the way to stretch the scanty income of the family for food and clothing, and it is she who must worry most about their future.

"Perhaps no other occupation is so difficult to measure, either in regard to the effort it consumes or to its effect upon women, as housework. The number of persons in a household; how many of them help the mother with her work; how many demand care; what hired help a mother can employ; the size and construction of the house; the conveniences and labor-saving devices; the location of the water supply; whether separating, churning, and butter making are among her undertakings—these are a few of the numberless

factors in household labor. Indeed, even the weather and the season of the year affect women's work, especially in the country and in such an area as the one studied (Montana) where high winds and dust storms are to be reckoned with; and where in certain months extra tasks, such as cooking for a round-up, for a lambing crew, or for harvest hands are added to a mother's regular housework."

Overwork and heavy lifting were causes frequently given to the investigators in Georgia as causes of permanent injury. Among these tasks were "carrying heavy milk pails," "hanging up meat that was heavy," "lifting tubs of water," "tossing corn on wagon," "carrying water," and "big washings."

For the enduring of such unusual strains, the mother is ill prepared by previous years of unceasing household toil without the labor-saving devices which make such work comparatively a mere pastime to the woman in a city apartment.

"Except for sewing machines, which were found in 322 households, or seven in ten, there was a great dearth of conveniences. Even the families who are fairly well to do have very few labor-saving devices. One mother who lived on an exceptionally good ranch explained that, though she could afford some of the conveniences themselves, the prohibitive cost of their transportation from the railroad placed them beyond her reach. Another family tried to buy a high chair for the baby, but found that the transportation would cost more than the chair itself.

"Two families were supplied with running water, which in one instance was piped into the house from a flowing spring, and in the other pumped in by a windmill, but no other family had running water, though twenty-two had windmills. On twenty-three homesteads there were engines but on five they were used only for farm purposes and not as a help in the housework. Eighteen mothers, however, had the advantage of engines, usually applied to the washing machine or to pump water for household use. Two hundred and forty-three, or over half the families, had no pump, but were obliged to dip water from a spring or river or draw it from a well, often without the aid of a windlass or pulley.

"Only a few women had sinks, all but 9 out of 463 having to carry their waste water out of the house. This is laborious at any time, but especially so on wash days." <sup>1</sup>

<sup>1</sup> *Ibid.*, p. 55-56.



In the rural home one of the most arduous daily tasks is that of carrying water from the spring. It is rare indeed to find a house of the poorer class with water piped inside. Some one must carry it as a rule from a distant source. This work usually comes within the mother's tasks and is recognized as a part of the daily chores. The responsibility of preparing the winter food supply is also hers.



One of the greatest advances in rural household economy is made when this particular task is obviated. Plenty of fresh, pure water saves health, even lives—and lightens woman's work.

Only a few of the most necessary staples are imported from outside. If there is not adequate refrigerating facility, she must cure the meat, gather and preserve fruits and vegetables, and perhaps even make the soap for laundry work. In addition, she must attend to the milking, churning, and poultry-raising; the sewing of clothes and perhaps even the weaving of cloth.

Whatever crop her husband raises, the woman must be prepared to lend a hand at special seasons when the condition of the crop requires an unusual spurt of labor quickly done. Besides this, it is quite the customary thing for the women of less prosperous families to hire out as laborers on the fields of others during emergency periods. The cotton crop in Texas, for example, demands the labor of women as well as children. In each county covered in a recent investigation <sup>1</sup> more than one-half the white mothers and eighty-five per cent of the negro mothers had done field work at some time during the preceding

<sup>1</sup> "The Welfare of Children in Cotton-Growing Areas of Texas," Children's Bureau Publication 134.

year. Such work involves many hours away from home, hurriedly prepared meals, and a tax on the mother's strength. Yet the majority of the mothers in this study who did field work had children under six years of age.

### 9. *Child Labor*

Legal restrictions against child labor in most states hitherto have made special exemptions for agricultural employment, in some cases specifying a certain minimum number of days per year



Children five to nine years of age, picking cotton in Texas. The sun is hot, hours are long, bags are heavy. The discipline of work like this, it is sometimes argued, is what children need! (Courtesy National Child Labor Committee)

that the child must attend school. There are several reasons for this exemption. In the first place, it would be difficult indeed to enforce an absolute prohibition of agricultural labor for children. It begins at home in the performance of simple, easy chores for the child's own family, and no one would dispute that such work in moderation is beneficial to the child. Yet, there is no way of setting limits to the amount of work that a father shall require of his children and no way of dealing with excessive cruelty in this respect, except by special complaints to boards of health or other authorities. In the country, of course, such individual supervision is next to impossible. There is no way of drawing a line, furthermore, between work done at home and work done on other farms. At emergency periods, such as harvesting and thinning

out, it is the universal custom for farmers to aid one another without specific remuneration. From this it is an easy step to engaging in work for pay on a distant farm during the special periods when large numbers of extra laborers are required. To a poor family, a few dollars thus earned by the children are so invaluable that it would be almost impossible to prevent them from sending their children away on such tasks. Many fathers believe that labor

of this sort is beneficial to the child, and within limits they are no doubt correct in this belief.

But one has only to look at the extreme cases to see that farm labor for children is at present very frequently carried beyond any desirable limits. In the first place, it necessitates absence from school over long periods and consequent retardation; in the second place, when a child of six or seven years is forced to work from dawn to dark with bent back and straining muscles in an open field that is baked by a blaz-



Sugar is made cheap at a heavy unseen cost.

ing sun or wet with freezing slush, it is clear that outdoor labor has been carried to a point far beyond that which can, by any effort of the imagination, be called healthful exercise.

#### 10. *Farm Work Without Means*

In spite of or because of all these handicaps, the farmer of the lowest level and his family must drudge incessantly to grub a living from some stubborn patch of ground, small in size and rejected by other farmers for its inferior quality. It is rocky and worked out in parts of New England, arid or swampy in the poorer districts of the South and in any case infertile and ungenerous to a discouraging degree. Farm implements and animals are expensive to buy, and the latter an added burden for food and shelter.

Unless he owns his plot, the farmer must struggle under a heavy mortgage, or, if he is a tenant, pay rent from his precarious returns. If he farms on shares, as many do in the South, he must give over to the landlord perhaps half of the bale of cotton that constitutes his year's produce.

The following account is no doubt too black as a description of farm life in general, but it represents truthfully and vividly one side of the picture:

May an ex-sodbuster wax indignant long enough to inform you that you are misusing the term "farm" [writes Edward Rutherford, Jr.]? Acreage with \$60,000 improvements, iron fences, bowling alleys, and fountains may be a country estate, a country place or a sylvan or rural paradise—but it isn't a farm. No, sir. A farm, unadorned and unbedecked by a realtor's imagination, is an area of vicious, ill-tempered soil with a not very good house, inadequate barns, makeshift machinery, happenstance stock, tired, overworked men and women—and all the pests and bucolic plagues that nature has evolved.

Its residence is generally wholly unimproved for modern comfort. Often the barn is the best building on the farm, for cows and horses will die and crops spoil when improperly housed much quicker than people do.

A farm is the theater of long, hard, unending labor, that is frequently lost, sometimes to soil that turns sour, sometimes to insect ravages, sometimes to drought or to too much rain. It is the incubator of heartbreaks—a cat that reaches a lightning paw out to crush the mouse every time he believes he is making headway toward freedom. It is the location where an ironical fate gores a farmer to death by the instrumentality of a suddenly ugly bull as he goes of an early summer morning to take a dip in the running brook a quarter of a mile from the house.

It is the site where the same fate crushes him in winter beneath a tree he is felling for firewood to keep his family warm—a tree that suddenly butts back and pins him to earth to freeze as he dies. All its romance is grim romance; the maltreater of animals is kicked to death by a horse, or the sisters who refuse to speak to each other die of loneliness.

A farm is a place where men work their backs into deformity before thirty, overstrain heart and acquire ruptures as boys. It is a place where ugly, brooding monotony, that haunts and taunts day and night, unseats the mind—especially of women. It is stark, grim, lonely, and treacherous—and truly a place of frequent and fatal disasters. A man will slave under the yoke of its spell and not leave it through the characteristic instinct of the human race for bondage. As long as he lives his wife will probably be game and stand by him. But if he dies from required exposure or accident or overwork, do you blame her for going—even to Hollywood? Maybe this accounts for the number of widows' farms for sale.

And, oh, yes. Most farms too struggle always in the shadow of a legal paper that is recorded in the County Clerk's office and that devours the profits—if any—with an amazingly steady appetite.<sup>1</sup>

### 11. *Compensations*

There is a brighter side to the life of poor people in the country. It is a most degenerate and unusual community that has no social

<sup>1</sup> From a letter to the *New York World*.



life in which even the poorest may join—church gatherings, dances, and holiday outings. It is an unusually miserable family where the men and boys, at least, do not take an occasional afternoon off for fishing or hunting, where living together is not brightened by some affection and coöperation among the members. Some of the most shiftless and ragged families strike the observer as not unhappy; they lounge about, sing, and enjoy fine weather while it lasts without a thought for the next meal, much less for any of the more remote aims of life. Of course this shiftlessness develops only with the continuance through the generations of extremely difficult situations in the face of which puny human struggle seems at last to be of so slight effect as to be scarcely worth while. Among the pioneers—and it must be insisted upon again that pioneering is still very usual even if modern pioneers are only venturers away from valleys into the hills or into new townships, rather than into such wide new regions as were being opened up during the era of the covered wagon which has become an American epic—poverty is not accepted as permanent. People think of themselves as the salt of the earth even though they are poor in the comforts of life. They do not accept strokes from the whip of Fate as they come later to be accepted by the rural poor and by the poor of the cities. For such independent souls the compensations of rural poverty are many. Other passages from the same chapters of Mr. Hamlin Garland's *Son of the Middle Border*<sup>1</sup> portray vividly some of them. Here the emphasis is frankly upon the best features, but these ought not to be overlooked in the attempt to understand the whole situation. Mr. Garland is himself not yet ancient and he lived through the experiences of which he writes here:

Our discomforts had their compensations! As we came back to the house at six, the kitchen was always cheery with the smell of browning flapjacks, sizzling sausages, and steaming coffee, and mother had plenty of hot water on the stove so that in "half a jiffy," with shining faces and sleek hair we sat down to a noble feast. By this time also the eastern sky was gorgeous with light, and two misty "sun dogs" dimly loomed, watching at the gate of the new day. . . .

My mother would have found these winter days very long had it not been for baby Jessie, for father was busily hauling wood from the Cedar River some six or seven miles away, and the almost incessant, mournful

<sup>1</sup> The Macmillan Company, 1922. The quotations are used by permission.

pipng of the wind in the chimney was dispiriting. Occasionally Mrs. Button, Mrs. Gammons, or some other of the neighbors would drop in for a visit, but generally mother and Jessie were alone till Harriet and Frank and I came home from school at half-past four.

Our evenings were more cheerful. My sister Hattie was able to play a few simple tunes on the melodeon and Cyrus and Eva or Mary Abbie and John occasionally came in to sing. In this my mother often took part. In church her clear soprano rose above all the others like the voice of some serene great bird. Of this gift my father often expressed his open admiration. . . .

There was very little dancing during our second winter but Fred Jewett started a singing school which brought the young folks together once a week. We boys amused ourselves with "Dare Gool" and "Dog and Deer." Cold had little terror for us, provided the air was still. Often we played "Hi Spy" around the barn with the thermometer twenty below zero, and not infrequently we took long walks to visit Burton and other of our boy friends or to borrow something to read. I was always on the trail of a book.

Harriet joined me in my search for stories and nothing in the neighborhood homes escaped us. Anything in print received our most respectful consideration. . . .

It is impossible that printed matter of any kind should possess for any child of today the enchantment which came to me from a grimy, half-dismembered copy of Scott or Cooper. *The Life of P. T. Barnum*, and Franklin's *Autobiography* we owned, and they were also wellsprings of joy to me. Sometimes I hold with the Lacedæmonians that "hunger is the best sauce" for the mind as well as for the palate. Certainly we made the most of all that came our way.

Naturally the schoolhouse continued to be the center of our interest by day and the scene of our occasional neighborhood recreation by night. In its small way it was our Forum as well as our Academy, and my memories of it are mostly pleasant.

Early one bright winter day Charles Babcock and Albert Button, two of our big boys, suddenly appeared at the schoolhouse door with their best teams hitched to great hobsleds, and amid much shouting and laughter the entire school (including the teacher) piled in on the straw which softened the bottom of the box, and away we raced with jangling bells, along the bright winter roads with intent to "surprise" the Burr Oak teacher and his flock.

I particularly enjoyed this expedition, for the Burr Oak School was larger than ours and stood on the edge of a forest and was protected by noble trees. A deep ravine near it furnished a mild form of coasting. The schoolroom had fine new desks with iron legs and the teacher's desk occupied a deep recess at the front. Altogether it possessed something of the dignity of a church. To go there was almost like going to town, for at the corners where the three roads met, four or five houses stood and in one of these was a post office. . . .



Often, thereafter, on a clear night when the thermometer stood twenty below zero, Burton and I would trot away toward the Grove to join in some meeting or to coast with the boys on the banks of the creek. I feel again the iron clutch of my frozen boots. The tippet around my neck is solid ice before my lips. My ears sting. Low-hung, blazing, the stars light the sky, and over the diamond-dusted snow-crust the moonbeams splinter.

Though sensing the glory of such nights as these I was careful about referring to it. Restraint in such matters was the rule. If you said, "It is a fine day," or "The night is as clear as a bell," you had gone quite as far as the proprieties permitted. Love was also a forbidden word. You might say "I love pie," but to say "I love Bettie," was mawkish if not actually improper. . . .

From the woodpile I was often permitted to go skating, and Burton was my constant companion in these excursions. However, my joy in his companionship was not unmixed with bitterness, for I deeply envied him the skates which he wore. They were trimmed with brass and their runners came up over his toes in beautiful curves and ended in brass acorns which transfigured their wearer. To own a pair of such skates seemed to me the summit of all earthly glory. . . .

Father was always willing to release us from labor at times when the ice was fine, and at night we were free to explore the whole country round about, finding new places for our games. Sometimes the girls joined us, and we built fires on the edges of the swales and played "gool" and a kind of "shinny" till hunger drove us home. . . .

Life was not all currying or muck-raking for Burt or for me. Herding the cows came in to relieve the monotony of farm-work. Wide tracts of unbroken sod still lay open to the north and west, and these were the common grazing grounds for the community. Every farmer kept from twenty-five to a hundred head of cattle and half as many colts, and no sooner did the green begin to show on the fire-blackened sod in April than the winter-worn beasts left the straw-piles under whose lee they had fed during the cold months, and crawled out to nip the first tender spears of grass in the sheltered swales. They were still "free commoners" in the eyes of the law. . . .

In herding the cattle we came to know all the open country round about and found it very beautiful. On the uplands a short, light-green, hairlike grass grew, intermixed with various resinous weeds, while in the lowland feeding grounds luxuriant patches of blue-joint, wild oats, and other tall forage plants waved in the wind. Along the streams and in the "sloos" cat-tails and tiger-lilies nodded above thick mats of wide-bladed marsh grass.—Almost without realizing it, I came to know the character of every weed, every flower, every living thing big enough to be seen from the back of a horse.

Nothing could be more generous, more joyous, than these natural meadows in summer. The flash and ripple and glimmer of the tall sun-flowers, the myriad voices of gleeful bobolinks, the chirp and gurgle of

red-winged blackbirds swaying on the willows, the meadow-larks piping from grassy bogs, the peep of the prairie chick and the wailing call of plover on the flowery green slopes of the uplands made it all an ecstatic world to me. It was a wide world with a big, big sky which gave alluring hint of the still more glorious unknown wilderness beyond.

Sometimes of a Sunday afternoon, Harriet and I wandered away to the meadows along Dry Run, gathering bouquets of pinks, sweet-williams, tiger-lilies and lady-slippers, thus attaining a vague perception of another and sweeter side of life. The sun flamed across the splendid serial waves of the grasses and the perfumes of a hundred spicy plants rose in the shimmering midday air. At such times the mere joy of living filled our young hearts with wordless satisfaction. . . .

After the planting a fortnight of less strenuous labor came on, a period which had almost the character of a holiday. The wheat needed no cultivation and the corn was not high enough to plow. This was a time for building fence and fixing up things generally. This, too, was the season of the circus. Each year one came along from the east, trailing clouds of glorified dust and filling our minds with the color of romance.

From the time the "advance man" flung his highly colored posters over the fence till the coming of the glorious day we thought of little else. It was India and Arabia and the jungle to us. History and the magic and pomp of chivalry mingled in the parade of the morning, and the crowds, the clanging band, the haughty and alien beauty of the women, the gold-embroidered housings, the stark majesty of the acrobats subdued us into silent worship.

I here pay tribute to the men who brought these marvels to my eyes. To rob me of my memories of the circus would leave me as poor as those to whom life was a drab and hopeless round of toil. It was our brief season of imaginative life. In one day—in a part of one day—we gained a thousand new conceptions of the world and of human nature. It was an embodiment of all that was skillful and beautiful in manly action. It was a compendium of biologic research, but, more important still, it brought to our ears the latest band pieces and taught us the most popular songs. It furnished us with jokes. It relieved our dullness. It gave us something to talk about.

We always went home wearied with excitement, and dusty and fretful—but content. We had seen it. We had grasped as much of it as anybody and could remember it as well as the best. Next day as we resumed work in the field the memory of its splendors went with us like a golden cloud.

Most of the duties of the farmer's life require the lapse of years to seem beautiful in my eyes, but haying was a season of well-defined charm. In Iowa, summer was at its most exuberant stage of vitality during the last days of June, and it was not strange that the faculties of even the toiling haymaker, dulled and deadened with never ending drudgery, caught something of the superabundant glow and throb of nature's life.

As I write I am back in that marvelous time.—The cornfield, dark-

green and sweetly cool, is beginning to ripple in the wind with multitudinous stir of shining, swirling leaf. Waves of dusk and green and gold, circle across the ripening barley, and long leaves upthrust, at intervals, like spears. The trees are in heaviest foliage, insect life is at its height, and the shimmering air is filled with buzzing, dancing forms, and the clover is gay with the sheen of innumerable gauzy wings.

The west wind comes to me laden with ecstatic voices. The bobolinks sail and tinkle in the sensuous hush, now sinking, now rising, their exquisite notes filling the air as with the sound of fairy bells. The kingbird, alert, aggressive, cries out sharply as he launches from the top of a poplar tree upon some buzzing insect, and the plover makes the prairie sad with his wailing call. Vast purple-and-white clouds move like stately ships before the breeze, dark with rain, which they drop momentarily in trailing garments upon the earth, and so pass in majesty amidst a roll of thunder.

The grasshoppers move in clouds with snap and buzz, and out of the luxurious stagnant marshes comes the ever-thickening chorus of the toads, while above them the killdeers and the snipe shuttle to and fro in sounding flight. The blackbirds on the cat-tails sway and swing, uttering through lifted throats their liquid gurgle, mad with delight of the sun and the season—and over all, and laving all, moves the slow wind, heavy with the breath of the far-off blooms of other lands, a wind which covers the sunset plain with a golden entrancing haze.

At such times it seemed to me that we had reached the "sunset region" of our song, and that we were indeed "lords of the soil."

It will be seen from Mr. Garland's description and from the illustration his own life furnishes that battling with Nature under handicaps can be productive of a high degree of family solidarity and individual strength of character. But these are the aspects of the situation which have been, on the whole, magnified and romanticized beyond all reason. The occasional forgetfulness of a holiday does not make up for weeks of grinding monotony, or the idle freedom of a Huckleberry Finn for the sodden brutality of the man he may grow up to be.

## 12. *Rural Poverty Self-Perpetuating*

The worst aspect of rural poverty as a social problem is not the suffering it entails at any one moment, but the difficulty of escaping from it, the cumulative character of its misfortunes. The little we know of the millions of struggling lives on this level indicates that if the full truth were discovered we should cease comforting ourselves with the fiction that any farmer's boy may rise, as Lincoln did, to fame and fortune. Such spectacular careers do happen occasionally, as a result of exceptional ability or good luck, and

it is no doubt inspiring to hold them up as models for all the youth of the country. But their occasional occurrence should not make us believe that the ascent is a possible one for most country people, hard-working and courageous though they may be.

The self-made prosperous farmer of today, though he began without property, had, it is safe to say, the initial advantages of health and opportunity. He probably came from a fresh pioneer family whose vitality had not yet been sapped by years of priva-



Poverty self-perpetuating. It can more readily be comprehended when one contrasts these two pictures. Left.—Mother and child of the comfort group. Right.—Widow and her nine children. (Photos Hine)

tion and disease; he worked to the top in a region and at a time when fertile land was waiting in plenty for the first plow.

Today the rise to agricultural prosperity is often an infinitely harder one. Those whose families have been for years on the land, yet remain poor, have grown up in an atmosphere of discouragement, in a social system already somewhat crystallized and less responsive to individual efforts. Many of them, unlike the old pioneers, begin life with the handicap of poor health, mental and physical, the culmination of three or four generations of sickness and malnutrition. Diseased or feeble-minded strains have for years intermarried, in remote and secluded districts or among the outcast poor; the result is a generation of children that are doomed from the start to misery.

For the rest, of keener mind, stronger body, and more indomitable will, there is always a chance, but no easy road to success.



There are more schools, more railroads, machinery, and scientific knowledge than ever before, but fewer natural resources freely open for exploitation. The way up is now a more humdrum grind; it means drudging for years, perhaps, as a migratory laborer, back and forth from region to region where the crops need special gangs of men, women, and children. Such a worker, unless he drags a family and goods about with him, is deprived of all the benefits of home and civic life. He wanders alone, often out of a job for weeks on end, then exhausted by spurts of grueling labor. The more fortunate may at last find steady jobs, as hired hands, with some established farmer. The next step, as a rule, is to farm some plot of ground for a fixed rental, or "on shares," giving over a certain percentage of the crop to the owner. This may be a step in advance, or may bring added responsibilities with no material gain. So also the final rise to proprietorship, under a mortgage or free and clear, has proved to be a barren victory for many families, when failure after failure of crops piled a crushing burden of debt upon their shoulders.<sup>1</sup>

Through debt, privation, and discouragement, then, poverty becomes a cumulative evil, one whose burdens grow of their own accord. Destroying, as it does, the very springs of ambition, it makes escape more and more difficult, except through the aid of some outside helping hand.

What can government agencies, scientific knowledge, and private philanthropy do to extend this helping hand? How can they assist the lonely discouraged millions of our mountains and prairies, swamps and deserts, to stand on their own feet, reach a higher level themselves and at the same time provide a more stable basis for national prosperity? That question we shall hold in reserve for later chapters, and proceed now to glance briefly at another phase of American poverty.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Is poverty an economic problem? Defend your statement.
2. Define poverty. Upon what basis would you differentiate the poverty level from the levels of comfort and riches?
3. Is there any definite connection between rural poverty in certain districts and the prevalence of child labor in these districts?
4. Is rural poverty self-perpetuating? Illustrate.

<sup>1</sup> For a discussion of casual labor see C. H. Parker, *The Casual Laborer*, or Nils Anderson, *The Hobo*.

## CHAPTER 3

### URBAN POVERTY

#### 1. *Urban Poverty Likewise Cumulative*

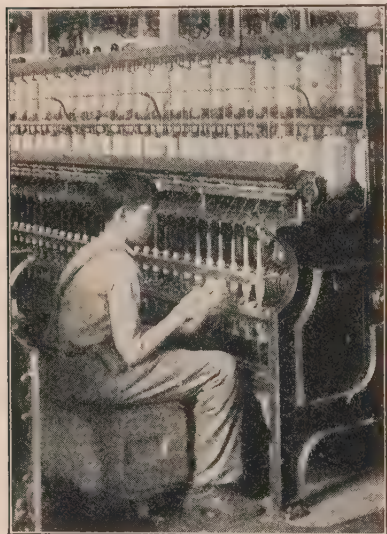
If a young man more unconquerable than the rest succeeds in breaking away from the vicious circle of rural poverty, there is no place for him to turn except to the bottom of the ladder in some town or city. There he must continue the struggle against poverty, with a new set of obstacles. Boys from the country together with children raised in poverty in the cities and our ever-flowing stream of immigrants constantly recruit the army of the urban poor.

Urban poverty under modern conditions, as contrasted with conditions of half a century ago, is often a less desperate situation than rural poverty, though it can seldom have such compensations as were described in the last chapter. The eyes of authorities and philanthropists are nearer, to mitigate something—even if very little—of the conditions that otherwise might become too shocking even for hardened sensibilities. If one is efficient, opportunities to show one's merit and to rise are more numerous in the city. Free or cheap public advantages are available, in near-by schools; inspection of food and sanitation, newspapers, moving pictures, and contacts with other minds exist, however restricted access to them may be. But in return for these, the mine, factory, or inferior office worker must surrender fresh air and sunshine for dark germ-infested streets, the roomy countryside for a crowded corner in a tenement house.

Here again the most serious evil, in the long run, is not the misery suffered at any one time, but the difficulty of rising above it. As always, the evil is cumulative; lack of proper food, clothing, and shelter during childhood means a weakened constitution, and renders the individual unable to compete on the same footing with more fortunate youths. It means that education must be limited. Public schools may be free, so far as books and tuition are concerned. But the student's living expenses must still be



paid, except in a frankly charitable institution, and a father bowed with years of struggle may find it impossible to meet them during many years of schooling. If the family is in extreme want, children are called upon while they are still very young to contribute not only to their own support but to that of others, including perhaps one or more incapacitated members. With heavy outside work, schooling rapidly becomes impossible; sickness comes,



A youthful machine-tender in an immense impersonal factory. (Photo Hine)

lessons are undone, and dreams of college scholarships or even the learning of some skilled trade must be reluctantly abandoned. "Working papers" are applied for, and the child begins work as an errand boy, parcel wrapper, or machine tender. He has joined the vast army of unskilled workers in some immense and impersonal system, a factory, mine, railway, or department store, his individuality lost in a crowd, his talents held down to a standardized routine.

For the unskilled, there is no escape from one such mechanism except to another of similar character. Many factories too are isolated, especially in

mountainous districts, and the worker there is completely cut off from opportunity to change a bad job for a better one. Especially when settled with a family, and lacking a surplus fund to support him in travel and search for work, a man will endure much before cutting loose at the risk of drifting.

A certain proportion of such workers, of course, the exceptionally fit or fortunate, rise entirely out of the masses at the bottom, to skilled work and prosperity. In some of our cities, especially in the South, mine and mill hands are mostly of old American stock; elsewhere the fitter descendants of the old families have risen above the poverty level into the class of skilled workmen, foremen,

trained clerks, and managers. Their places at the bottom have been taken by negro labor or by the recent floods of South European immigrants. Of these, in turn, some of the more capable and fortunate are gradually pushed upward to help take charge of more recent cheap labor. The rest remain, bedraggled failures, to help populate the slums along with their newly arrived immigrant neighbors.

Progress does occur, then, indubitably, and it would be false to paint the picture too black. There are meteoric individual careers, and there is a gradual pushing upward of masses of labor by economic expansion. But it is equally false, and a much more current mistake, to take the boastful platitudes of an occasional self-made magnate as representing what any "poor but honest" boy can do if he tries. It is mistaken also, from the standpoint of human happiness, to think entirely in terms of slow economic movements. They are usually imperceptible to the individual, and work too slowly to save his life from failure. Old age, sickness, and death come rapidly, dreams fade, and poverty holds its grip on the next generation with scarcely less bitter tenacity than on the present one.

## 2. *Low-Grade Urban Work*

The sort of task done by workers of the lowest rank tends itself to keep them there. Unlike the old-time handicrafts, modern industrial methods have very slight educative value for those engaged in them. They too often call for blind obedience and automatic habit, rather than for independent thinking. The mechanical repetition of a single minute step in a process of manufacture, whose relation to other steps may not be comprehended, calls for no powers of construction or organization. It arouses no interest, no joy in labor, leads nowhere; it is deadening to mental growth and to aspiration. Under the best of sanitary conditions, it is fatiguing to nerves and body, since the strain is concentrated on a single small set of nerves and muscles, used over and over.

The tendency of our mechanical age in general has been to reduce all workers to the task of tending more or less automatic machines. Every machine, improved device or process tends to make unnecessary and valueless some human labor. New jobs are eventually created for men thus thrown out of work, because of

the increased prosperity resulting from a saving in the expense of production. But the interval of unemployment for the individual may be long and costly. The main trouble is, moreover, that his old trade, which perhaps cost him years of training to acquire, has become suddenly worthless; the same task can now be done by a machine, with a child or woman to watch, feed and oil it. He may find a job calling for skill of something like the same character, and proceed to learn it; but the specialization of modern



Neither joy nor interest in this monotonous work. (Courtesy National Child Labor Committee. Photo Hine)

industry makes jobs requiring understanding and skill narrow, unique and diverse, though unskilled machine-tending jobs grow more similar rather than more diverse. So the tendency of mechanical progress is to throw many workers down into lower and lower grades of work, less differentiated from one another, requiring less ability, and yielding less pay. This is one of the prices society pays for its increased efficiency.

The young and still ambitious man will of course take time after working hours for self-advancement, studying at night school or by correspondence to improve his general education, or to fit himself for a job higher up. There is always a demand for capable executives in modern industry, and machinery has by no means replaced all the highly paid hand trades. This is the road to advance that thousands are following, and it is often a fairly clear road after one has succeeded in making a start. For the man at the very bottom, though, the necessary strength and rudiments of education may be out of reach, and the hard labor required to keep body and soul together for himself and his family leaves not an ounce of energy over at the end of the day. After ten or twelve, or even after eight, hot and exhausting hours in a steel mill, one is in no condition to go on working at night, but is ready only to drop into bed, or at best to snatch an hour or so of some distracting amusement.

Really to bring home to the mind the meaning of urban life lived in the surroundings available to the masses of the workers, no factual description is wholly adequate. Such a picture as Mr. Theodore Dreiser draws in his *Color of a Great City* opens the imagination to the larger implications of our industrialism. He is describing here "A Certain Oil Refinery":<sup>1</sup>

There is a section of land very near New York, lying at the extreme southern point of the peninsula known as Bayonne, which is given up to a peculiar business. The peninsula is a long neck of land lying between those two large bays which extend a goodly distance on either hand, one toward the city of Newark, the other toward the vast and restless ocean beyond Brooklyn. Stormy winds sweep over it at many periods of the year. The seagull and the tern fly high over its darksome roof-tops. Tall stacks and bare, red buildings and scores of rounded tanks spread helter-skelter over its surface, give it a dreary, unkempt, and yet not wholly inartistic appearance which appeals, much as a grotesque deformity appeals or a masque intended to represent pain.

This section is the seat of a most prosperous manufacturing establishment, a single limb of a many-branched tree, and its business is the manufacturing, or rather refining, of oil. Of an ordinary business day you would not want a more inspiring picture of that which is known as manufacture. Great ships, inbound and outbound, from all ports of the world, lie anchored at its docks. Long trains of oil cars are backed in on many spurs of tracks, which branch from main-line arteries and stand like caravans of steel, waiting to carry new burdens of oil to the uttermost parts of the land. There are many buildings and outhouses of all shapes and dimensions which are continually belching forth smoke in a solid mass, and if you stand and look in any direction on a gloomy day you may see red fires which burn and gleam in a steady way, giving a touch of somber richness to a scene which is otherwise only a mass of black and gray.

This region is remarkable for the art, as for the toil of it, if nothing more. A painter could here find a thousand contrasts in black and gray and red and blue, which would give him ample labor for his pen or brush. These stacks are so tall, the building from which they spring so low. Spread out over a marshy ground which was once all seaweed and which now shows patches of water stained with iridescent oil, broken here and there with other patches of black earth to match the blacker buildings which abound upon it, you have a combination in shades and tones of one color which no artist could resist. A Whistler could make wonderful blacks and whites of this. A Vierge or a Shinn could show us what it means to catch the exact image of darkness at its best. A casual visitor, if he is of a sensitive turn, shudders or turns away with a sense of depression haunting

<sup>1</sup> Theodore Dreiser, *The Color of the Great City*, Boni and Liveright, 1923, pp. 198-204. Quoted by permission of the author and the publishers.



him. It is a great world of gloom, done in lines of splendid activity, but full of the pathos of faint contrasts in gray and black.

At that, it is not so much the art of it that is impressive as the solemn life situation which it represents. These people who work in it—and there are thousands of them—are of an order you would call commonplace. They are not very bright intellectually, of course, or they would not work here. They are not very attractive physically, for nature suits body to mind in most instances, and these bodies as a rule reflect the heaviness of the intelligence which guides them. They are poor Swedes and Poles, Hungarians and Lithuanians, people who in many instances do not speak our tongue as yet, and who are used to conditions so rough and bare that those who are used to conditions of even moderate comfort shudder at the thought of them. They live in tumble-down shacks next to “the works” and they arrange their domestic economies heaven only knows how. Wages are not high (a dollar or a dollar and a half a day is good pay in most instances),<sup>1</sup> and many of them have families to support, large families, for children in all the poorer sections are always numerous. . . .

[Their homes] taken as a mass . . . and in extreme heat or cold, under rain or snow, when the elements are beating about them, achieve a swart solemnity, rise or fall to a somber dignity or misery for which nature might well be praised. They look so grim, so bare, so hopeless. Artists ought to make pictures of them. Writers ought to write of them. Musicians should get their inspiration for what is antiphonal and contrapuntal from such things. They are of the darker moods of nature, its meanest inspiration.

However, it is not of these houses alone that this picture is to be made, but of the work within the plant, its nature, its grayness, its intricacy, its rancidity, its commonplaceness, its mental insufficiency; for it is a routine, a process, lacking from one year's end to another any trace of anything creative—the filling of one vat and another, for instance, and letting the same settle; introducing into one vat and another a given measure of chemicals which are known to bring about separation and purifications or, in other words, the process called refining; opening gates in tubes and funnels which drain the partially refined oils into other vats and finally into barrels and tanks, which are placed on cars or ships. You may find the how of it in any encyclopedia. But the interesting thing to me is that men work and toil here in a sickening atmosphere of blackness and shadow, of vile odors, of vile substances, of vile surroundings. You could not enter this yard, nor glance into one of these buildings, nor look at these men tramping by, without feeling that they were working in shadow and amid foul odors and gases, which decidedly are not conducive to either health or the highest order of intelligence.

Refuse tar, oil, and acids greet the nostrils and sight everywhere. The great chimneys on either hand are either belching huge columns of black

<sup>1</sup> This would have to be nearly doubled for present workers. *The Authors.*



or blue smoke, or vapory blue gases, which come in at the windows. The ground under your feet is discolored by oil, and all the wagons, cars, implements, machinery, buildings, and the men, of course, are splotched and spotted with it. There seems to be no escape. The very air is full of smoke and oil.

It is in this atmosphere that thousands of men are working. You may see them trudging in in the morning, their buckets or baskets over their arms, a consistent pallor overspreading their faces, an irritating cough in some instances indicating their contact with the smoke and fumes; and you may see them trudging out again at night, marked with the same pallor, coughing with the same cough; a day of peculiar duties followed by a night in the somber, gray places which they call home. Another line of men is always coming in as they go out. It is a line of men which straggles over all of two miles and is coming or going during an hour, either of the morning or the night. There is no gayety in it, no enthusiasm. You may see depicted on these faces only the mental attitude which ensues where one is compelled to work at some thing in which there is nothing creative. It is really, when all is said and done, not a pleasant picture . . .

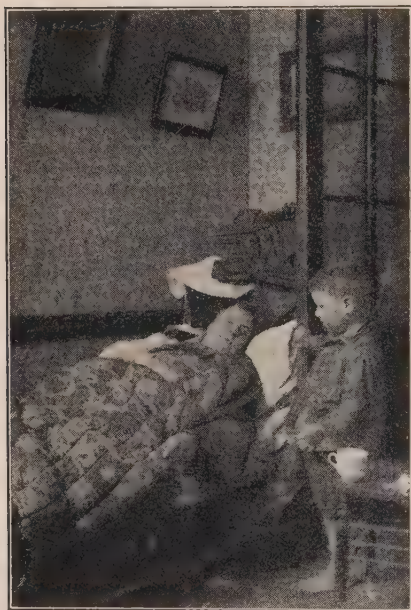
A long trough, a single low wooden tub, in a small boarded-off space, in the boss teamsters' shanty, with neither soap nor towels and only the light that comes from a low door, is all the provision made for the host of "still-cleaners," the men who are engaged in the removal of the filthy refuse—tar, acids, and vile residuums from the stills and agitators. In connection with the boiler-room, where over three hundred men congregate at noontime and at night, there is to be found nothing better. You may see rows of grimy men in various departments attempting to clean themselves under such circumstances, and still others walking away without any attempt at cleaning themselves before leaving. It takes too long. The idea of furnishing a clean dining-room in which to eat or a place to hang coats has never occurred to any one. They bring their food in buckets.

However, that vast problem, the ethics of employment, is not up for discussion in this instance: only the picture which this industry presents. On a gray day or a stormy one, if you have a taste for the somber, you have here all the elements of a gloomy labor picture which may not long endure, so steadily is the world changing. On the one hand, masters of great force and wealth, penurious to a degree, on the other the victims of this same penuriousness and indifference, dumbly accepting it, and over all this smoke and gas and these foul odors about all these miserable chambers. Truly, I doubt if one could wish a better hell for one's enemies than some of the wretched chambers here, where men rove about like troubled spirits in a purgatory of man's devising; nor any mental state worse than that in which most of these victims of Mother Nature find themselves. At the bottom nothing but darkness and thickness of wit, and dullness of feeling, let us say, and at the top the great brilliant blooms known to the world as the palaces and the office buildings and the private cars and the art collections of the principal owners of the stock of this

concern. For those at the top, the brilliancy of the mansions of Fifth Avenue, the gorgeousness of the resorts of Newport and Palm Beach, the delights of intelligence and freedom; for those beneath, the dark chamber, the hanging smoke, pallor, foul odors, wretched homes. Yet who shall say that this is not the foreordained order of life? Can it be changed? Will it ever be, permanently? Who is to say?

### 3. *Living Without a Surplus*

Over people of the class that works in oil refineries, or in other kinds of mills and shops, living from hand to mouth, there hover



An illustration of what it means to live without surplus above immediate needs.  
(Photo Hine)

always the three dreaded shadows of unemployment, sickness, and old age, poisoning leisure and inducing an agonized frenzy of struggle to get ahead. What legislation and philanthropy are doing to drive back these menaces we shall see in a later chapter. But it may be said here that the task is far from accomplished for the greater number of the poor.

What it means to live without any surplus above immediate needs is difficult to imagine for the comfortable citizen. He rarely has occasion to worry seriously over what would happen in case of a temporary interruption of income; there is a bank account, or a little property to be sold in case of a long illness, or at least some one to borrow from. Old age is far off, and his savings mount up promisingly. But a family that must count each penny to provide the next slender meal is plunged into sharp and genuine distress by any momentary reverse.

Not only does poverty leave one unprotected when such troubles come; it makes these troubles far more frequent and severe than is

the normal lot of mankind. Constant fear for tomorrow, in the first place, is a factor contributing to lowered vitality, and thus to the breaking down of resistance. In the second place, each of the three evils mentioned is aggravated by poverty conditions.

#### 4. *Unemployment*

Loss of his job may be expected at any moment by the unskilled worker. His job is held from day to day, or from hour to hour; he is easily replaceable at a moment's notice by hundreds of others, and is usually laid off without compunction. Without funds to wait or travel, without influential friends, or much knowledge of where work is to be had, he is handicapped in the search for a new position.

The nature of present-day industry is such as to make large-scale unemployment almost inevitable. It is coördinated into great interdependent units, through credit and the subdivision of processes, so that a slowing up of demand at any one point in the system, or the collapse of one unit, is bound to

have wide effects. When one firm or industry turns off men, it is more than likely that others will be doing the same, instead of taking them on. Seasonal fluctuations, periods of heavy demand for labor followed by small demand, occur throughout a whole industry, such as farming or building. Periods of prosperity and hard times are general, not local.<sup>1</sup> Sometime in the future, perhaps,

<sup>1</sup> Cf. also later discussions of the rhythm of prosperity and depression and its relation to unemployment, in Book II.

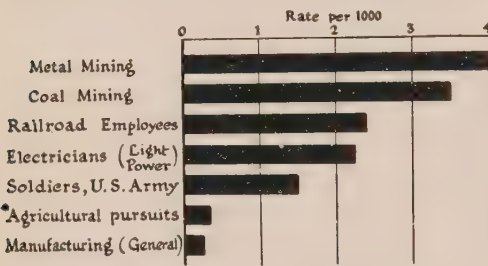


To beg for bread has been the ultimate degradation throughout human history. Men and women will suffer most indignities and survive most shames before they come to this. In an age of surplus the bread line still survives, though shrunk in numbers. (Photo Hine)

industry will be so highly and flexibly coördinated that men not needed at one point can be immediately absorbed somewhere else. But we are now in an intermediate stage between that condition and the old system of small, self-sufficient units.

### 5. *Illness and Accident; High Death Rate*

Loss of health is also especially prevalent on the poverty level, partly because of faulty nourishment and bodily care. If a man might come home, after a grueling day's work, to quiet rest, a good dinner and a night's sleep in well ventilated rooms, he might hope to get into condition for another day of labor. But the low-



Estimate of fatal industrial accident rates in the United States in 1913—includes forestry and animal husbandry. (Based on estimates by Hoffman, U. S. Bureau of Labor Statistics)

grade city laborer, coming home to the slums or squalid cottages which surround the mill, enters another dreary atmosphere, dangerous to physical health and deadening to mental growth. Large families crowded for sleeping into the same room readily contract

tuberculosis and other contagions. When the mother and older children have jobs away from home there is scant incentive left for careful scrubbing and cooking at the end of a hard day. Even the little available money may be spent, through ignorance, for unwholesome articles, wrongly combined for nourishment.

Rowntree, in an investigation of York, England, found that the death rate was over twice as high among the poor as among those who were most comfortably situated. There was also among the poor a much higher rate of illness and a much lower standard of health. Out of every thousand children born in the poorest district, 247 died within a year after birth, as compared with 184 and 173 in the middle and highest sections. In families who kept servants the infant mortality rate was only 94 per thousand. Heights, weights, and general physical condition of school children also showed a striking relation to economic status.

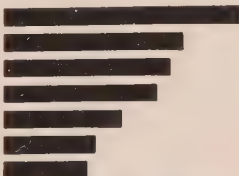
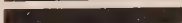
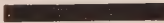
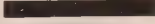
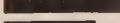


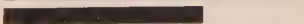
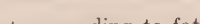


Significant relations between low wages and sickness were found in 1916 by the United States Public Health Service in seven South Carolina mill villages. In different income groups, the number of cases of disabling sickness, and the rates per 1000 persons, were as follows: <sup>1</sup>

FAMILY INCOME		NUMBER OF PERSONS CONSIDERED	SICK PERSONS (DISABLED)	
Half-Month per Adult Male	Yearly Basis per Family of Five		Number	Rate per 1000 Persons Considered
Less than \$6.....	\$460	1312	92	70.1
\$6-\$7.99.....	\$460-\$615	1038	50	48.2
\$8-\$9.99.....	\$615-\$765	784	27	34.4
\$10 and over.....	Over \$765	1027	19	18.5
All incomes.....	.....	4161	188	45.2

Studies of infant mortality made by the Children's Bureau of the United States Department of Labor in various cities indicate a consistent relationship between family income and the death rate for children. Those of poor parents had a death rate from two to nearly seven

times as great as those of families on the comfort level. Infant mortality was highest where room-crowding and other housing evils existed; it was also much higher among the children of wage-earning mothers than among those whose mothers were not gainfully employed.

Under \$450	166.9	
\$450 - \$549	125.6	
\$550 - \$649	116.6	
\$650 - \$849	107.5	
\$850 - \$1049	82.8	
\$1050 - \$1249	64.0	
\$1250 and Over	59.1	
No Earnings	210.9	
Not Reported	139.7	

Infant mortality rate according to fathers' earnings. Rate based upon deaths of infants under one year of age per 1000 live births. The death rates are higher among families with the lower incomes. (Based on statistics from Children's Bureau, U. S. Dept. of Labor)

Among working men and women, high rates of illness and accident are directly traceable, not only to undernourishment and lack of proper bodily care, but to the nature of the work done. Some progress is now being made by sanitary rules in places of

<sup>1</sup> U. S. Public Health Reports, 1918, XXXIII, No. 47, 2038-51.



work, enforcement of protective devices on machinery, and prohibition of unnecessarily dangerous chemicals, but these safeguards are not at all universal or adequate.

Manual labor in modern industry is inevitably dangerous. In mining, poisonous gases and collapses of rock are of frequent occurrence, and diseases are induced by darkness, extreme heat or cold, and dampness. Factories have machinery that must be oiled and tended, where a moment's carelessness means the loss of life or limb. According to the nature of the product, the atmosphere may be full of noxious vapors, flying particles of metal filings, stone dust or cotton lint, which enter the lungs and con-

1-Over \$1,000,000,000

2-Over \$3,000,000,000

- (1) Direct economic waste from accidents in the United States, 1919. (2) Value of total manufactured products in the United States, 1919. (Adapted from *Industry Illustrated*, May, 1925)

tribute to the development of tuberculosis.

Building of skyscrapers and blasting of tunnels cannot go on without the definite expectation of a casualty list more or less

heavy. Thus the wife or mother must live in daily dread of seeing a maimed or shattered body brought home to her instead of the man that left home in the morning.

These conditions, and above all the extreme fatigue of heavy labor, make the working-man old before his normal three score and ten. In several industries, a man must expect to be "used up" and comparatively helpless at the age of forty or forty-five. His wife or children must then assume the burden.

## 6. *Women and Children in Urban Industry*

One of the results of machinery has been to take women and children out of the home and put them at work beside the men. Special strength or skill no longer being required in a large part of the industrial process, there is demand for cheaper labor. Men are discarded in favor of boys, girls, and untrained women. School work suffers, tender bodies are stunted and emaciated. Women of depleted vitality cannot bear healthy children, or care properly for those they have brought into the world.

In this enlightened age we are prone to suppose that no employer would stoop to exploit the weak and helpless, or that humani-

tarian legislation is adequate to prevent one who would. But child labor legislation is still being thwarted on a hundred plausible excuses; the consciences of employers are easily soothed, especially when the women and children themselves, driven by want, clamor for work. Meanwhile, the employment of such labor is on the increase in America, as the accompanying chart will indicate.

According to the 1920 census, more than 1,000,000 children of the United States are working, of whom 400,000 are in

1880	2,647,000	
1890	4,005,000	
1900	5,319,000	
1910	8,076,000	
1920	8,549,000	

Number of women gainfully employed in the United States, 1880-1920. (Based on National Industrial Conference Board estimates)

agricultural employment. Already, reports from thirty-nine cities show an increase since then of 20 per cent in child labor and nine cities report an increase of 50 per cent.

State and federal laws have been of some effect, as is shown by the fact that between 1910 and 1920 child labor was materially decreased. But, as we have already said, there were in 1920 still 1,060,858 children between ten and fifteen gainfully employed,



21.1 per cent of the women and girls in the United States, ten years old and over, were gainfully employed in 1920. (Based on N. I. C. B. estimates)

one-twelfth of all those in the country in this age group. Nearly 400,000 of these were not yet thirteen, and the Census does not report those under ten; investigations have revealed many child workers of eight and nine. Moreover as we have also implied, a new and startling increase in child labor is beginning. Figures given out by the Children's Bureau in August, 1923, are as follows: 1922 compared with 1921 (a) twenty out of thirty-one cities reporting to the Bureau showed increase in work permits issued and (b) five of these, increases of over 100%; 1922, first half, compared with 1921, first half, for twenty-one cities furnishing monthly figures, 18% increase; 1922, second half, compared with 1921, second half, for

the twenty-one cities, 43% increase; 1923, first half, compared with 1922, first half, eleven cities, namely, Baltimore, Bridgeport, Hartford, Jersey City, Manchester, New Haven, Paterson, St. Louis, Waterbury, Newark, and New Britain, report combined increase of 57%.<sup>1</sup> This, then is the extent to which we allow the weak and helpless to be exploited, to the inevitable weakening, too, of the national strength of the future. What this actually means in the way of life that is implied is again a matter that needs imaginative enlightenment. Another passage from *The Color of a Great City*,<sup>2</sup> describing a "Christmas Eve in the Tenements," paints the picture that figures refuse to develop:

. . . They are infatuated with the rush and roar of a great metropolis. They are fascinated by the illusion of pleasure. Broadway, Fifth Avenue, the mansions, the lights, the beauty. A fever of living is in their blood. An unnatural hunger and thirst for excitement is burning them up. For this they labor. For this they endure a hard, unnatural existence. For this they crowd themselves in stifling, inhuman quarters, and for this they die. . . .

There is one region, however, where, in the terrific drag of the struggle for existence, the softer phases of this halcyon mood are at first glance obscure. It is a region of tall tenements and narrow streets where, crowded into an area of a few square miles, live and labor a million and a half of people. It is the old-time tenement area, leading almost unbrokenly north from Franklin Square to Fourteenth Street. Here, during these late December evenings, the holiday atmosphere is beginning to make itself felt. It is a region of narrow streets with tall five-story, even seven-story, tenements lining either side of the way and running thick as a river with a busy and toilsome throng.

The ways are already lined with carts of special Christmas goods, such as toys, candies, Christmas tree ornaments, feathers, ribbons, jewelry, purses, fruit, and in a few wagons small Christmas greens such as holly and hemlock wreaths, crosses of fir, balsam, tamarack pine, and sprigs of mistletoe. Work has not stopped in the factories or stores, and yet these streets are literally packed with people, of all ages, sizes and nationalities, and the buying is lively. . . .

. . . Cheap, unsalable, stale, adulterated—these are the words that should be stamped on every bottle, basket, and barrel that is here being scrambled over. And yet the purchasers would not be benefited any thereby. They must buy what they can afford. What they can afford is this.

The street, with its mass of life, lingers in this condition until six o'clock,

<sup>1</sup> Cf. also Ch. 17 for a discussion of child-labor legislation.

<sup>2</sup> Pp. 275-283.

when the great shops and factories turn loose their horde of workers. Then into the glare of these electric-lighted streets the army of shop girls and boys begins to pour. Here is a spectacle interesting and provocative of thought at all seasons, but trebly so on this particular evening. It is a shabby throng at best, commonplace in garb and physical appearance, but rich in the qualities of youth and enthusiasm, than which the world holds nothing more valuable.

Youth in all the glory of its illusions and its ambitions. Youth, in whom the cold insistence of life's physical limitations and the law have not as yet worked any permanent depression. Thousands are hurrying in every direction. The street cars which ply this area are packed as only the New York street-car companies can pack their patrons, and that in cold, old, dirty, and even vile cars. There are girls with black hair, and girls with brown. Some have even white teeth, some shapely figures, some a touch of that persuasive charm which is indicated by the flash of an eye. There are poor dresses, poor taste, and poor manners mingled with good dresses, good taste, and good manners. In the glow of the many lights and shadows of the evening they are hurrying away, with that lightness of spirit and movement which is the evidence of a long strain of labor suddenly relaxed. . . .

And the homes to which they are hurrying, the places which are dignified by that title, but which here should have another name! Thousands upon thousands of them are turning into entryways, the gloom or dirtiness or poverty of which should bar them from the steps of any human being. Up the dark stairways they are pouring into tier upon tier of human hives, in some instances not less than seven stories high and, of course, without an elevator, and by grimy landings they are sorted out and at last distributed each into his own cranny. Small, dark one-, two-, and three-room apartments, where yet on this Christmas evening, one, and sometimes three, four, and five are still at work sewing pants, making flowers, curling feathers, or doing any other of a hundred tenement tasks to help out the income supplied by the one or two who work out. Miserable one- and two-room spaces where ignorance and poverty and sickness, rather than greed or immorality, have made veritable pens out of what would ordinarily be bad enough. Many hundreds or thousands of others there are where thrift and shrewdness are making the best of very unfortunate conditions, and a hundred or two where actual abundance prevails. These are the homes. Let us enter.

Zorg is a Bohemian, and has a little two-room apartment. The windows of the only one which has windows look into Elizabeth Street. It is a dingy apartment, unswept and unwhitewashed at present, where on this hearty Christmas Eve, himself, his wife, his wife's mother, and his little twelve-year-old son are laboring at a fair-sized deal table curling feathers. The latter is a simple task, once you understand it, dull, tedious, unprofitable. It consists in taking a feather in one hand, a knife in the other, and drawing the fronds quickly over the knife's edge. This gives them a very sprightly curl and can be administered, if the worker



be an expert, by a single movement of the hand. It is paid for by the dozen, as such work is usually paid for in this region, and the ability to earn much more than sixty cents a day is not within the range of human possibility. Forty cents would be a much more probable average,<sup>1</sup> and this is approximately the wages which these several individuals earn. Rent uses up three of the twelve dollars weekly income; food, dress, coal, and light six more. Three dollars, when work is steady is the sum laid aside for all other purposes and pleasures, and this sum, if no amusements were indulged in and no sickness or slackness of work befell, might annually grow to the tidy sum of one hundred and fifty-six dollars; but it has never done so. Illness invariably takes one part, lack of work a greater part still. In the long drag of weary labor the pleasure-loving instincts of man cannot be wholly restrained, and so it comes about that the present Christmas season finds the funds of the family treasury low.

It is in such a family as this that the merry Christmas time comes with a peculiar emphasis, and although the conditions may be discouraging, the efforts to meet it are almost always commensurate with the means.

However, on this Christmas Eve it has been deemed a duty to have some diversion, and so, although the round of weary labor may not be thus easily relaxed, the wife has been deputed to do the Christmas shopping and has gone forth into the crowded East Side street, from which she has returned with a meat bone, a cut from a butcher's at twelve cents a pound, green pickles, three turnips, a carrot, a half-dozen small candles, and two or three toys, which, together with a small three-foot branch of hemlock, purchased earlier in the day, complete the Christmas preparation for the morrow. Arba, the youngest, although like the others she will work until ten this Christmas Eve, is to have a pair of new shoes; Zicka, the next older, a belt for her dress. Mrs. Zorg, although she may not suspect, will receive a new market basket with a lid on it. 'Zorg—grim, silent, weary of soul and body—is to have a new fifteen-cent tie. There will be a tree, a small sprig of a tree, upon which will hang colored glass or paste balls of red and blue and green, with threads of popcorn and sprays of flutter-gold, all saved from the years before. In the light of early dawn tomorrow the youngest of the children will dance about these, and the richness of their beauty will be enjoyed as if they had not been so presented for the seventh and eighth time.

Thus it runs, mostly, throughout the entire region on this joyous occasion, a wealth of feeling and desire expressing itself through the thinnest and most meager material forms. About the shops and stores where the windows are filled with cheap displays of all that is considered luxury, are hosts of other children scarcely so satisfactorily supplied, peering earnestly into the world of make-believe and illusion, the wonder of it not yet eradicated from their unsophisticated hearts. Joy, joy—not a tithe of all that is represented by the expenditures of the wealthy, but only such as may be encompassed in a paper puffball or a tinsel fish, is here sought

<sup>1</sup> The prices Mr. Dreiser mentions are those that prevailed before the war. They would be somewhat more than half again as high for 1925. *The Authors.*



for and dreamed over, an earnest, child-heart-longing which may never again be gratified if not now. Horses, wagons, fire engines, dolls—these are what the thousands upon thousands of children whose faces are pressed closely against the commonplace window panes are dreaming about, and the longing that is thereby expressed is the strongest evidence of the indissoluble link which binds these weakest and most wretched elements of society to the best and most successful.

### 7. *The Problem of Measuring Poverty*

The first step toward remedying an evil is to discover as clearly as possible its nature and extent. Every one knows, in general, that conditions such as have been described in this chapter exist, though perhaps few have taken the trouble to imagine what they would mean in concrete detail. But the usual answer of the well-to-do and complacent citizen is that poverty of the worst sort is rapidly disappearing, in fact is largely a thing of the past, since the war brought high wages, and since the unions have grown powerful enough to grab the lion's share of the nation's wealth. There is, as usual in such assertions, a fraction of truth in this answer. Wages did rise for some workmen, for a while; some unions, here and there, were able to demand more than their share; wholesale starvation such as happens in the Far East and in Russia is no longer possible in this country, and there is a steady rise in per-capita income. But it is false to imagine that the task of abolishing poverty is accomplished when it is little more than begun. The despair and misery of utter destitution are still a terrible reality to millions of American people. Hundreds of thousands of women and children are forced to work beyond the limits of their normal strength every day—to say nothing of the conditions of work of men which are often admittedly bad. It is



Despair—an unrecognized by-product of industry. (Photo Hine)

unjust to these, as well as unpatriotic to the nation as a whole, to form a too rosy picture of national prosperity, since it prevents active efforts to abolish the evil that poverty is. If there is any cogency in figures, it will be well to inquire to what extent poverty exists in America today.

Indefinite as the answer must be, statistical investigations of the last few years have cast considerable light upon it. The question has two parts: what constitutes a poverty level, and how many people are on that level? The notion of poverty, comfort, or riches includes many intangible and unmeasurable elements, as we have already remarked. But in order to make any headway in statistical knowledge, we must try to find some tangible factor that can be measured, and with which the various intangible ones, such as health and happiness, are presumably on the whole correlated. The obvious thing to measure, from all practical points of view, is the amount of money income, in relation to the amount and quality of concrete goods it will buy. When we put the question on this basis, it becomes: how much income must one have to be above the poverty level, to buy the minimum of goods that are necessary for decent comfort? Then we may ask, what share of the population receives less than this income? These are separate problems, each of great complexity. Statistical facts are of considerable help in answering them, but must be interpreted with common sense and with careful analysis of the many factors involved.

### 8. *Standards of Living*

Let us consider first the question of the amount necessary for a comfort standard. To mention any particular sum of money as a necessary income is of course more or less arbitrary; a few dollars one way or the other may make little difference. Furthermore, one cannot say definitely just what goods are necessary, or of what quality, or of what amount. But one can make extended observations of the amounts earned and spent by families in various years, localities, and circumstances, see what goods are purchased, and at what prices, and form a general idea of the conditions of living associated with the various levels of income and expenditure. Then, if families of a certain level are observed to suffer persistently from malnutrition and from inadequate clothing

and housing, that level of income can be said without much hesitation to be below the comfort level. Going up the list, and finding a steady increase of well-being, one can fix upon certain not wholly arbitrary amounts of income as associated with the prevailing concepts of poverty and comfort.

Of course any such amounts, and the resulting standards, must be considered as limited in relevancy to the price level of a particular time and place, or else explicitly averaged over larger areas and periods. Furthermore, a distinction must be made between the amount necessary for a child and an adult, for a single individual and a family. An adult is sometimes reckoned as equivalent in expense to one and a fraction children, so that families of various sizes and ages may be reduced to a common denominator. The "standard family" is usually thought of as constituting five members, the parents and three children. This would be an average about sufficient to keep the population constant in size in



Poverty involves this kind of work for women in the effort to maintain a bare subsistence for the family. (Courtesy *The Survey*)

view of the existence of many unmarried persons. From the viewpoint of national welfare, the economist believes himself justified in holding that the minimum family income regarded as adequate should be large enough to support a family of that size.

It is in making such semi-moral judgments, and in applying the terms "comfort," "decency," etc., that there is most room for argument, and no amount of statistics can indicate an answer. Economists at the present time differ considerably as to just where the line should be drawn between the various levels; what one calls "comfort," another calls "minimum for health and decency," reserving the word "comfort" for a slightly higher level. But the first requirement for an understanding of conditions is not to decide where these names belong; it is to form some idea of

what the levels themselves mean; what a certain income will buy.

Douglas, Hitchcock, and Atkins, in a recent summary of the figures,<sup>1</sup> distinguish three separate levels below what they call "comfort." The lowest, "poverty," is defined as "a level at which the income, even though expended with ordinary prudence, is insufficient under modern city conditions for even the physical upkeep of a family of moderate size. Characteristics: Under-

nourishment, overcrowding, deterioration of household equipment and clothing, liability of acute distress with any minor disturbance of the daily equilibrium. The family is either not on a permanent basis of self-support or it is so at the expense of its physical vigor.

. . . In the larger American cities today (1923) families living on from \$1000 to \$1100 would be at this level." The second level is called "minimum of subsistence." Here the income is "sufficient for complete physical and material upkeep of a bare kind,



Mothers and children have a better chance on the comfort level. (Photo Hine)

but insufficient either for major emergencies or for any social pleasures that cost money." On this level, according to Professor W. F. Ogburn, fuel-gathering and the use of cast-off clothing cease as major sources of supply; the wife's clothing budget rises to about 75% of her husband's; a family of five occupies at least three rooms; \$1100 to \$1400 would be a subsistence level of income in larger American cities. Of this food would constitute about 40% of the total; clothing, 18%; housing, 19%; fuel and light, 6%, and sundries, 17% (including all house furnishings, health, recreation, education, and insurance).

The "subsistence plus" or "minimum health and decency" level allows for not only the physical but the elementary social

<sup>1</sup> *The Worker in Modern Economic Society*, 1923, p. 283f.



necessities. Some recreation, paid medical attention, car fare, insurance, etc., are possible without subtracting from the rent or mother's clothing allowance. Housing would include the equivalent of a four- or five-room cottage or flat in a respectable neighborhood, in good repair and probably with a basement, running water, private toilet, probably bath, closet and cupboard space. Food for the family of five would approximate 13,000 calories per day and consist of the cheaper cuts of meat and fish, dried beans, peas, cheese, eggs, milk, butter, oleo and lard. Clothing would be of the cheapest serviceable grade, but of neat and respectable appearance, preserved by sufficient replacements. The man's clothing budget would be about \$80; the wife's, \$75; the three children's, \$135. The allowance for sundries would permit a daily and Sunday paper and an occasional magazine, stationery and postage, movies once a fortnight, with five to ten dollars a year left over for excursions and other amusements, 25 to 50 cents a week for tobacco, ice cream, candy, soft drinks, etc. Such a level would have cost in most American cities in autumn, 1922, from \$1500 to \$1700.

The "fair minimum" standard of the National Industrial Conference Board (an employers' organization) in September, 1921, for Detroit, was \$1697.95. This allowed as a weekly budget: food, \$10.30; shelter, \$8.08; clothing, \$5.68; fuel and light, \$2.20; sundries, \$6.40; total, \$32.66. The food allowance of \$10.30 a week means 49 cents a meal: 11 cents each for two adults and 9 cents each for three children. The item of \$6.40 a week for sundries must include all expenditures for household supplies and furnishings, physician, dentist and drugs, laundry, carfare, newspapers, education, amusements and recreation, church and charity, insurance and burials. For various sizes of family, this was the cost of maintaining a fair minimum standard:

BUDGET ITEMS	MINIMUM COST OF LIVING FOR A MAN, WOMAN, AND—							
	ONE CHILD		TWO CHILDREN		THREE CHILDREN		FOUR CHILDREN	
	Week	Year	Week	Year	Week	Year	Week	Year
Food.....	\$6.74	\$350.00	\$8.52	\$442.95	\$10.30	\$535.60	\$12.08	\$628.25
Shelter.....	6.54	340.00	8.08	420.00	8.08	420.00	8.08	420.00
Clothing.....	4.27	221.91	4.97	258.53	5.68	295.15	6.38	331.77
Fuel and Light	1.75	91.00	2.20	114.40	2.20	114.40	2.20	114.40
Sundries.....	4.80	249.60	5.60	291.20	6.40	332.80	7.20	374.40
All Items...	\$24.10	\$1252.81	\$29.37	\$1527.08	\$32.66	\$1697.95	\$35.94	\$1868.82



The fourth or "comfort" level is attained by the highest wage-earners, and costs about \$2100. Here food expenses do not rise much, but there is a large increase in clothing, housing and especially "sundries"; the last item passing beyond the 25% mark. A rise in the proportion spent for sundries indicates usually that the family is in possession of the basic necessities and can afford more of the dispensable enjoyments of life, although a family will sometimes insist upon having these luxuries even at the cost of skimping on food and clothing. \$2100, however, is far from a luxury level; families spending almost that amount were found to fall considerably below the minimum diet requirements for health, as worked out by Professor M. E. Jaffa of the University of California. Of this comfort level and those who attain it we shall have more to say in the next chapter.

Here it may be remarked that in this book no exact definitions of poverty, comfort and riches are held to, such as these of Douglas, Hitchcock, and Atkins. We shall not attempt to draw the line between "poverty" and "minimum for subsistence," or between the "health and decency" and "comfort." Roughly, we shall mean by poverty the whole range below health and decency; by comfort the range between that and affluence.

#### *9. Below the Comfort Standard; the Lower End of the Wage Scale*

The next problem is to estimate how many of our families fall within the poverty group, thus broadly defined. There are many general guesses, not strictly provable, but made after thorough study of the facts known; for example, the United States Commission of Industrial Relations asserts:

"It is evident both from the investigations of this commission and from the reports of all recent governmental bodies that a large part of our industrial populations are, as a result of the combination of low wages and unemployment, living in a condition of actual poverty. How large this proportion is cannot be exactly determined, but it is certain that at least one-third and possibly one-half of the families of wage earners employed in manufacturing and mining earn in the course of the year less than enough to support them in anything like comfortable and decent conditions."

Whether this is an exaggerated estimate, and whether it is typical of workmen in other industries, will appear from the more ex-

licit figures we are about to examine. Income during the year 1918 has been more thoroughly investigated than that of any other year before or since; so we shall review some of the facts in regard to it, and afterward note what changes have taken



The American Standard? (Photo Hine)

place since that time, both in incomes and their purchasing power.

This table presents in graphic form the number of incomes on various levels in 1918.

A CONDENSED SUMMARY OF THE DISTRIBUTION OF PERSONAL INCOMES IN 1918 <sup>1</sup>							
(Excluding 2,500,000 soldiers, sailors, and marines)							
Income Class		Simple Distribution		Cumulative Distribution			
		Number of Persons	Amount of Income	Over the Number of Persons	Class Below Amount of Income	Under the Number of Persons	Class Above Amount of Income
	Under Zero	200,000	\$—125,000,000	37,569,060	\$57,954,722,341	200,000	\$—125,000,000
\$	0-\$ 500	1,827,554	685,287,806	37,369,060	58,079,722,341	2,027,554	560,287,806
	500- 1,000	12,530,670	9,818,678,617	35,541,506	57,394,434,535	14,558,224	10,378,966,423
	1,000- 1,500	12,498,120	15,295,790,534	23,010,836	47,575,755,918	27,056,344	25,674,756,957
	1,500- 2,000	5,222,067	8,917,648,335	10,512,716	32,279,965,384	32,278,411	34,592,405,292
	2,000- 3,000	3,065,024	7,314,412,994	5,290,649	23,362,317,049	35,343,435	41,906,818,286
	3,000- 5,000	1,383,167	5,174,090,777	2,225,625	16,047,904,055	36,726,602	47,080,909,063
	5,000- 10,000	587,824	3,937,183,313	842,458	10,873,813,278	37,314,426	51,018,092,376
	10,000- 25,000	192,062	2,808,290,063	254,634	6,936,629,965	37,506,488	53,820,382,439
	25,000- 50,000	41,119	1,398,785,687	62,572	4,128,339,902	37,547,607	55,225,168,126
	50,000- 100,000	14,011	951,529,576	21,453	2,729,554,215	37,561,618	56,176,697,702
	100,000- 200,000	4,945	671,565,821	7,442	1,778,024,639	37,566,563	56,848,263,523
	200,000- 500,000	1,976	570,019,200	2,497	1,106,458,818	37,568,539	57,418,282,723
	500,000-1,000,000	369	220,120,399	521	536,439,618	37,568,908	57,638,403,122
	1,000,000 and over	152	316,319,219	152	316,319,219	37,569,060	57,954,722,341
Total .....		37,569,060	\$57,954,722,341				

<sup>1</sup> From *Income in the U. S.*, by the Nat. Bur. Econ. Research, N. Y. 1921.

## PRESENT LEVELS OF LIVING

It is also instructive to observe the distribution of incomes in terms of cumulative percentages, so that one may see at each level what percentage of incomes fall below and above it. Family incomes average somewhat higher than personal incomes in the lower economic classes, since more than one person in the family usually contributes to the income.

NUMBER OF INCOMES AT VARIOUS LEVELS IN 1918

ANNUAL INCOME LESS THAN	CUMULA- TIVE PER- CENTAGE OF PERSONS	CUMULA- TIVE PER- CENTAGE OF INCOMES	ANNUAL INCOME LESS THAN	CUMULA- TIVE PER- CENTAGE OF PERSONS	CUMULA- TIVE PER- CENTAGE OF INCOMES
\$ 600.....	9.5	2.4	\$ 5000.....	97.8	81.2
800.....	22.4	8.3	6000.....	98.4	83.5
1000.....	38.7	17.9	8000.....	99.0	86.3
1200.....	54.5	29.1	10,000.....	99.3	88.0
1400.....	67.1	39.7	15,000.....	99.6	90.5
1600.....	76.0	48.3	25,000.....	99.9	93.6
1800.....	82.0	54.9	50,000.....	99.94	95.3
2000.....	85.9	59.7	100,000.....	99.98	96.9
2500.....	91.4	67.5	500,000.....	99.998	99.1
3000.....	94.1	72.3	1,000,000.....	99.9996	99.5
4000.....	96.6	77.9	Over \$1,000,000..	.0004	.5

In 1919 the United States Bureau of Labor Statistics made an extensive investigation of family incomes during the preceding year, based on 12,000 white and 750 colored families in ninety-two localities within forty-three states. The following table presents a summary of some of the findings:

EARNINGS OF FAMILY AND OF HUSBAND BY SIZE OF FAMILY AND INCOME GROUP <sup>1</sup>

INCOME GROUPS	NUMBER OF FAMILIES	PERCENT- AGE OF FAMILIES	AVERAGE PERSONS PER FAMILY	AVERAGE FAMILY EARNINGS	AVERAGE HUS- BAND'S EARNINGS	PERCENTAGE HUSBAND'S OF TOTAL EARNINGS
Under \$900.....	332	2.74	4.3	\$782	\$766	97.9
\$900-\$1199.....	2423	22.7	4.5	1037	1014	97.7
\$1200-\$1499.....	3959	55.5	4.7	1294	1252	96.8
\$1500-\$1799.....	2730	78.1	5.0	1566	1488	95.0
\$1800-\$2099.....	1594	92.3	5.1	1854	1691	91.2
\$2100-\$2499.....	705	97.1	5.7	2161	1786	82.75
\$2500 and over....	353	2.92	6.4	2684	1796	66.9
Total.....	12,096	100.00	4.9	1455	1349	92.73

<sup>1</sup> Adapted from *The Monthly Labor Review* of the Bureau of Labor Statistics, United States Department of Labor (December, 1919), pp. 29-41.

The average family income for the entire group was \$1513, of which \$1347 was derived from the earnings of the husband.

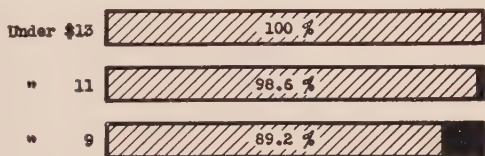
How do workmen in various industries compare with each other as to income? This question is of importance in showing where in our system the need is greatest. The New York Department of Labor, in a report on wage earnings for April, 1922, gives statistics for the eleven principal industries for the state. The highest paid (water, light, and power) men received a weekly wage of \$32.76, or \$1703, if employed steadily throughout the year. The average of all industries was \$24.15 a week, or \$1255.80 a year.

Among railroad men in 1921 the lowest paid were the section hands,

who received \$77.11 a month, or \$925.32 a year. Wages of women

have been especially low, in all industries. An investigation of 26,500 women workers in Tennessee in 1917 showed 70% receiving less than \$9.00 a week. Of 800 women in the District of Columbia interviewed in 1918, 64% received approximately \$10.00 a week. Out of 113,643 women workers in New York in 1919 who had replaced men, two-thirds received less than \$14.00 a week. Wage investigations by the Massachusetts Minimum Wage Commission in five industries have revealed the following: Women receiving under \$9—candy, 62.8%; canning, 89.2%; corset, 36.8%; paper box, 39%; sweaters, 35.8%. Under \$11—candy, 85.1%; canning, 98.6%; corset, 57.5%; paper box, 59.4%; sweaters, 57.6%. Under \$13—candy, 94.5%; canning, 100%; corset, 76%; paper box, 77.2%; sweaters, 76.7%.

The next two tables<sup>1</sup> show the wide discrepancy in most industries between the actual income received and the amount called for by the Philadelphia minimum standard of health and comfort. The amount fixed upon in that standard for 1918 (by the Philadelphia Bureau of Municipal Research) was \$1637 for a family of five. In November, 1919, the amount was raised to



This chart illustrates graphically the situation in the canning industry cited herewith.

<sup>1</sup> From Douglas, Hitchcock, and Atkins, *The Worker in Modern Economic Society*, pp. 302-303.



## PRESENT LEVELS OF LIVING

\$1803, and in August, 1920, to \$1988, because of rises in price levels. If the increase was evenly distributed between these two dates, the amount necessary in March, 1920, would have been \$1885. But the actual earnings were as follows:

AVERAGE EARNINGS OF MALE EMPLOYEES IN TWELVE INDUSTRIES AS REPORTED BY THE NATIONAL INDUSTRIAL CONFERENCE BOARD

INDUSTRY	SEPTEMBER, 1918		MARCH, 1920	
	Average Actual Weekly Earnings (a)	Average Yearly Earnings (a x 52)	Average Actual Weekly Earnings (c)	Average Yearly Earnings (c x 52)
Boots and shoes.....	\$23.62	\$1228	\$28.70	\$1492
Chemical manufacturing.....	25.24	1312	35.72	1857
Cotton manufacturing.....	20.50	1066	24.87	1293
Furniture manufacturing.....	17.39	904	22.87	1189
Hosiery and knit goods.....	22.50	1170	27.65	1438
Leather.....	23.36	1215	30.18	1569
Metal manufacturing.....	27.73	1442	29.79	1549
Paper manufacturing.....	23.20	1206	28.82	1499
Printing and publishing.....	23.69	1232	31.67	1647
Rubber manufacturing.....	27.93	1452	36.32	1889
Silk manufacturing.....	21.48	1117	28.98	1507
Wool manufacturing.....	22.93	1192	28.70	1492

INDICATED YEARLY EARNINGS COMPARED WITH AMOUNT NECESSARY TO MAINTAIN THE PHILADELPHIA STANDARD

INDUSTRY	SEPTEMBER, 1918		MARCH, 1920	
	Amount Needed to Bring Full-Time Yearly Earnings to Minimum	Percentage Increase Needed to Bring Full-Time Yearly Earnings to Minimum	Amount Needed to Bring Full-Time Yearly Earnings to Minimum	Percentage Increase Needed to Bring Full-Time Yearly Earnings to Minimum
Boots and shoes.....	\$409	33	\$393	26
Chemical manufacturing.....	325	26	28	2
Cotton manufacturing.....	571	54	592	46
Furniture manufacturing.....	733	81	696	59
Hosiery and knit goods.....	467	40	447	31
Leather.....	422	35	316	20
Metal manufacturing.....	195	14	336	22
Paper manufacturing.....	431	36	386	26
Printing and publishing.....	405	33	238	14
Rubber manufacturing.....	185	13	4*	..
Silk manufacturing.....	520	47	378	25
Wool manufacturing.....	445	37	393	26

\* Indicates excess.



Have standards of living among wage-earners risen considerably during the last few years? In particular, did labor profiteer at the expense of the rest of the country during and just after the war? A glance at the average earnings of workmen in the last few years, expressed in terms of money, would seem to indicate a substantial rise. But prices also rose sharply during that time, so that a rise in money income was not as much as it seemed to be, in terms of ability to buy concrete goods. The following table, adapted from *Income in the United States*, pp. 102-103, expresses, year by year, the average annual earnings of employees in all industries, first in terms of the face value of the money, second in terms of its purchasing power at the 1913 price level. The third column, taking the 1913 average as 100, shows the ratio of other years to it in terms of actual purchasing power.

YEAR	AVERAGE ANNUAL EARNINGS *	VALUE IN TERMS OF 1913 PRICES	RELATIVE INDEX (1923 = 100)
1909.....	626	656	90.7
1910.....	656	671	92.8
1911.....	648	659	91.1
1912.....	692	696	96.3
1913.....	723	723	100.0
1914.....	674	668	92.4
1915.....	697	677	93.6
1916.....	831	755	104.4
1917.....	961	745	103.0
1918.....	1078	682	94.3

\* Includes amounts paid for pensions and compensation for injuries.

During this time per capita production in the United States was increasing more than 30 per cent. Wage-earners not only did not receive the same share per capita of the increased product year after year, but were actually receiving less goods at the end of the period than at the beginning.<sup>1</sup>

<sup>1</sup> Figures do not agree on this point. Recent investigations into real wages by Professor Alvin H. Hansen, published in *The American Economic Review*, xv, pp. 27-42, for March, 1925, seem to indicate a considerable increase for this same period. Whatever increase there may have been, however, assuming the figures here cited to be wrong, appears not to have been sufficient to raise the mass of workers above the poverty level.

Mr. Hansen's figures cover a longer range of time and are quoted in another place in this book to show that *on the whole* we have raised the real levels of living. See Ch. 6 below.

A comparison between these figures and the amounts necessary to maintain a standard of health and decency will demonstrate beyond a doubt that poverty is still with us, and not decreasing so fast as the optimist would have us believe. What is to be done about it? There are two current answers, both based on lack of intelligent reflection. One is to dismiss the fact from mind as rapidly as possible, trusting to luck that all will come out right, and branding as a calamity howler any one that takes a less rosy view. The other is to rush to the extreme of proposing a violent




An alley such as this is represents the great failure of industrial life. What desirable qualities in men and women could possibly develop here? Photo Hine)

revolution, without any clear idea of how the situation is to be mended. In later chapters we shall see the possibility of an intermediate attitude, one that seeks to analyze causes specifically and discover gradual, practical remedies.

Meanwhile, poverty remains as a plague center in our national civilization. It is the chief source of the criminal and restless disintegrative forces which spread upward to disorganize social living. Their symptoms, in dishonesty, violent crimes, strikes, mob rule, epidemics of disease, are a constant reminder that our economic system is still unsound at bottom. There are many ways of

dismissing this reminder, with some careless explanation—Bolshevist propaganda, moral decline or greed among the laboring classes. But these facile theories, even if true, leave untouched the main problem of why discontent and crime find so easy a foothold among the rural and urban poor. Opportunities for the formation of coöperative habits and ideals are lacking for a great share of our population; obstacles are in their way which prevent orderly growth toward happiness and constructive work, and the removal of these obstacles is a necessary step in the economic progress of society as a whole.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Point out significant differences between rural and urban poverty.
  2. What connection is there between unemployment and industrial accidents, and urban poverty?
  3. Explain how and in what way the employment of women and children in industry is apt to influence the employment of men.
  4. What is meant by a "standard of living"? How is it determined?
  5. Is there apt to be any direct correlation between density of population in urban centers and extent of poverty? Explain.
  6. What is the general economic situation of our population: (1) the kind of work done, (2) the income received for it, (3) the quality of life lived?
- 

## CHAPTER 4

### COMFORT

#### 1. *The Basis of Rural Comfort.*

By comfort we shall mean a state intermediate between poverty and riches, or rather the infinite number of various states and degrees of prosperity between these two extremes.<sup>1</sup>

By contrast with poverty, sufficient material goods are obtainable, without keen struggle, to satisfy basic demands and provide some luxuries. Work offers some outlet for creative powers; there is opportunity, at least in leisure time, for education and



A "comfort" home of primitive man.

enjoyment. By contrast with riches, there is not complete freedom from the need to work for a living, and not everything purchasable for money is within reach. With the comfort level as with the poverty level, there are many differences between country and city as to its necessary

conditions and the forms it takes, so that it will pay to consider these two aspects separately. We shall, therefore, postpone for the moment discussion of the implications of comfort in the cities and concentrate on its rural aspects.

Under more primitive conditions of life in the open, health and happiness were possible with a very few material accessories. The savage dweller in a temperate country, provided with game and wild plant food, where conditions demanded action and cunning, giving in return health and freedom from "nerves," where neither excessive cold nor barren soil made the struggle bitter, and where nature was not so bountiful as to make him lazy—such a man was surely above the poverty level in mind and body. But in the

<sup>1</sup> Not necessarily the "middle class" or *bourgeoisie*, in the narrow sense of these terms.

modern civilized order a country dweller must, as a rule, live in a certain way and possess certain things to attain comfort. In a later chapter the student will find a discussion of the problems of farm production.<sup>1</sup> We are not particularly concerned with them here. One of the necessary conditions of rural comfort is good producing equipment, though it has always to be remembered that farming is not only an industry but also a domestic arrangement. It is a way of living together, not only a way of working. For this reason the producing and the consuming of a farm are inextricably mingled. Just here we shall glance at the country home of the comfortable rural dwellers, at the food consumed there, and at its amusements as well as its way of work. The description that follows must not be taken as representative of all rural life. Indeed, we have already described another kind of rural life that is lived on the poverty level; and although comfort is commoner—at least a livable degree of comfort—in country life than in urban life, there are still all too many people living in conditions that are not, by any stretch of the imagination, to be described as comfortable. Where the comfort level is attained, however, the life that is achieved has many amenities peculiar to itself. It is to this life and its unique features that we turn in this chapter.

## 2. *The Country Home*

The generations just past, in America, would know the country home without any formal description because many of our ancestors were born in one of them. They are still to be seen, of course, if one goes to the country, but the fact is that much of the old significance of the home has been lost, as we shall have occasion to remark again later on, so that though we may see the old houses still standing, they mostly seem only to wait patiently for their dissolution in the "slow and smokeless burning of decay." For the home of the comfortable American tradition was a large frame house set under shady trees and with a lawn-space spreading out to the passing road; it stood quite alone and had a self-contained, even a self-sufficient air; and well it might, of course, for a whole family's activities centered here and were mostly carried out within view of its windows. But now there has come a change. Houses need not be so large any more! Indeed, they must be not so large.

<sup>1</sup> Chapters 7 ff.



Families are smaller; and every extra room counts for additional burden to the woman who must care for it. Children are away at school, probably in the near-by village, much of the time from the fifth to the seventeenth years. The number of acres under the care of the family has probably shrunk, since there are few boys to help the father.

As fast as the old houses wear out they are being replaced by new ones. And the new ones are better suited to their purpose. They are smaller, but they are tighter against the winds of winter and cooler under the summer sun; they are apt to have furnaces and running water, perhaps even electric lights, probably concrete foundations and a cellar. The old home was and had none of these things. But they are a part of a comfort level of life.

### 3. *Food for Country Living*

Not many years ago, before the modernizing of our systems of transport, especially before the day of the concrete road and the motorcar, folk who lived upon the land were confined pretty much to the food that could be grown upon the home place or near it. There has been a steady improvement, however, and now it is a remote farm indeed that, if the farm is prosperous enough, cannot furnish a table as varied and consequently as healthful as any in the towns.

Every locality is naturally better suited to the growing of some particular crop than of many others. So, many famous dairy districts such as the hill-countries of New York, Pennsylvania, and Wisconsin, have frosts so late in spring and so early in fall that slow-maturing vegetables or fruits cannot ripen in the short summer season. Folk in such regions have to be content to confine their efforts to making dairy products—milk, butter, and cheese—or to the growing of grains, root crops, and legumes. These they sell in the market centers and with the money they receive they purchase the products, for instance, of the fruit grower, who lives in a country of longer summers, or of the sugarcane or coffee growers, who live in distant lands with totally different climates.

There is an obvious advantage in this. The hill farmer, instead of having to live all winter on salt pork and home-ground flour, can keep up his family's health by furnishing his table with vege-

tables from low countries, fruits from the semi-tropics, and even occasional importations from far countries. He in turn furnishes a hungry world with the products of his dairy and grains from his fields; and, in consequence, the truck farmer or the fruit grower who can ill afford to grow grass for cows on his valuable land, can buy dairy products in the market for far less than it would cost him to produce them for himself. When each locality thus pursues the type of agriculture for which it is best fitted and exchanges its surplus for the surpluses of other localities, all who engage in the process benefit. This, of course, is the fundamental reason why there is trade in the world at all, and the reason why the modern development of commerce has gone so far. We are too apt to think of trade as a burden upon the world instead of as the contribution to human well-being, which, of course, it is. And in no respect, perhaps, has it contributed more to the pleasure and the health of the race than in changing the rural diet. It was not altogether the strain of hard physical labor that caused the degenerative diseases, the rheumatism, and the generally high death rate among an older generation of farmers. It was partly, at least, their diet. For the body, as modern physiologists have discovered, needs green vegetable foods and fruits for vitamins and roughage. And a diet of salt meat, potatoes, and pie is not the kind that is wanted—particularly through the winter months. Another great change has been the elimination of alcoholic liquors which, taken steadily, have so deleterious an effect upon the system. The new diet, including foods from all the world—and particularly, of course, the sugar from the beet and the cane that forms so large a part of it—has removed the need for alcoholic stimulation. Where this has happened the cessation of liquor selling has followed naturally.

All these changes have been for the better. They have made life pleasanter and healthier and they have made it longer; it seems fair to say that they have very appreciably helped to raise the living level of the masses of country dwellers nearer to comfort.

#### 4. *Country Work*<sup>1</sup>

Whatever else we may say of farming as an occupation, it must be admitted that it is better suited to the human mechanism than

<sup>1</sup> See also Chs. 7 and 8 for a discussion of farm production.

most other kinds of work. The factory worker is apt to be a machine tender in the present phase of industrial development, and to have to bend for long hours above a moving machine monotonously repeating a limited set of motions. At such a job he uses almost none of his mental powers and but a few of his physical mechanisms. At least a farmer's work requires brains for planning and the use of a complete physical equipment. There may be a temporary monotony about hoeing corn or plowing a



A good herd of Holsteins. A considerable part of country work consists of tending live stock. J.S.C.

field, but it is only temporary. There is a new and different job to be done tomorrow or next week.

And if this is true of the farmer, himself, it is just as true for other members of the group who "work the farm." Farm women are beset by problems, but they are the problems of a working woman with a real place in the economic world, not, like those of her city sister, largely either makeshift invasions of the male working world or feeble attempts at the disguise of economic uselessness. The country woman, mistress of a home that is the operating center of the productive unit—the farmstead—is in a situation that could scarcely be bettered, if woman cares to bear a significant part of the common burdens of the race. She not only controls the family budget, she has an indispensable part in the producing activities of the place. The city woman, if she has any touch with the productive world, has it apart from her home life. It in a sense is the enemy of her family's solidarity, not its coördinating force.

Children too have a better chance than city children have, in many ways. They learn to help with real work—the boys in barns and fields, the girls in kitchen or sewing-room. There is freedom and space and there are endless interesting affairs to pursue from morning until night in farm and house, in garden, orchard and field.

The farm home maintained at the comfort level may legitimately claim all these advantages of the working life over that life in the cities. The city worker is too apt to be confined, to have a monot-



The conditions under which children play in the city and in the country. The country offers safer, more healthful, and more spacious playgrounds. (Photos by Playground and Recreation Association of America and Lewis W. Hine)

onous and wearing job and to have to find his family life apart from his work in cramped quarters supplied with too little light and air and freedom, although this paints too black a picture of the middle class life of the towns. Really, the farmer, even though he is a manual worker, ought, perhaps, not to be compared with the urban worker. He is really both worker and business man. And his life is the more complete—for being both. He plans and directs and he also labors.

Farm work follows a cycle determined by the changing seasons. In spring the land has to be got ready for planting—plowing, harrowing, and fertilizing have to be done in all the tillable fields. Then the planting has to be done. As the crop springs up it has to be hoed and cultivated to keep it clear of weeds and to keep the soil loosened and free. In midsummer there is hay to be cut and stored, later there is grain harvest and fruit harvest and all



the varied activities of this time of traditional richness and plenty. Late fall sees plowing for spring begun again and winter furnishes a time for tree pruning and wood cutting, the repairing of fences, machinery, and barns, the careful tending of stock and planning for the new year. All in all, it is a varied round, yet sufficiently repetitive to train its workers and to build up standards. It is a full life, too, that calls out the best and fullest capabilities of men. But this supposes, of course, the fulfillment of the conditions for the attainment of the comfort level that will be discussed later: fertile land and enough of it; nearness to markets; a favoring climate and an advanced state of the industrial arts. If these are lacking, the comfort level is difficult to attain and the family will be found to be existing on a lower level of economic life. There will be a shack or hut for a home, with little furniture or decoration, the food supply will be limited and confined to the poorest quality, malnourishment of the whole family will become chronic; work will be shirked because of a lack of energy and will tend to be of the drudgery sort, and because work of this sort yields but small returns, the standard will fall lower and lower until the family will find itself existing in that indefinite borderland between destitution and independence that is so well known a phenomenon in every community. A family in this condition is the easy prey of every disease and vice known to rural life. It is comfort that forms the family bulwark against the ills of life. And it is comfort that furnishes the basis of progress.

### 5. *Country Amusements*<sup>1</sup>

The rural amusements in America, where country life is lived at the comfort level, can be and still are much more of the traditional sort than the changing life of the city knows. The older farm festivals have, of course, very nearly disappeared except in the more remote of the rural regions of the country. There are no longer the social gatherings that coincided with the climaxes of the year: the husking bee, the harvest festival, the country fair, the sugaring off, and the like. These have pretty much disappeared, though they still exist in some places; but the tradition of them still persists and colors the amusements of country life

<sup>1</sup> See also Ch. 9 below on the making of farm life more satisfying and beneficial.



with a distinctive flavor of the soil that is quite lacking in the more sophisticated amusements of the urban livers. That flavor of the soil seems to give them a more satisfying and lasting quality.

Profound changes have reached this department of country life as well as all others through the medium of the changes in the industrial arts, for now concrete roads are spreading widely and where roads are not concreted they are often at least improved. The automobile has become so cheap that nearly every country family can have one, even if it has to be decrepit from age



Getting ready for the "old-time country fair." The "side-shows" were not the least important part of the fair.

and ugly from nature. And these two—roads and automobiles—between them have brought the farm closer to the city than farms have ever been to cities before. For the first time in America, life, at least rural life, has become community life. Other agencies have had a part in this transformation too, such as the telephone, cheap magazines and other literature, and later on, of course, the radio. The farm family now can enjoy and does enjoy amusements no different in kind from those that city people have. A village has to be very small indeed not to have a moving-picture show, a church, and even perhaps a library. And a home has to be a very poor home indeed that does not have a phonograph and a radio.

This change from the traditional amusements of rural America to the kind of amusements that industrialism and the city life

between them have made possible has undoubtedly affected the rural culture of the United States. For one thing it has tended to lessen the cultural differences between country and city and so has very decidedly smothered out regional differences in public opinion and made the thought of the American people really an American thought and not one devoted exclusively to local problems. But aside from these phases of the situa-



The radio has brought a new world within reach of the rural home. (Courtesy General Electric Company)

tion the important thing is to see that the coming of a new kind of amusements has been a distinctive gain to the country dweller. It has given him the advantages of city life without the crowding of that life and without the monotonies and pressures of its kind of work. Country dwellers are no longer "hayseeds"; they know the latest fashions through the magazines; they hear political speeches over the radio; they see the doings of the world at the "movies"; they are in constant touch with the newest views of all kinds of popular leaders.

All of this kind of amusement that has crept into country life is, of course, deplored by many old-fashioned country-folk, for

there are still many such. The country man or woman of the old school who was raised in an atmosphere that made him self-reliant, shrewd, and simple in his tastes, thinks of the uncomplicated environment in which he was raised as of the most desirable sort and thinks of the innovations which seem so attractive to his descendants as decorative features of life which are apt to be enervating and to lead to futility. He clings to his



A "little red schoolhouse" where one teacher usually carries on the work of all grades in one small room. (Milbank Memorial Fund. Photo Hine)

simple notions. He wants little to do with newfangled art or even with newfangled science. He reads his Bible and clings to the decalogue as an ethical guide. He conceives of woman's job and her life as being quite as simple as his own, and he resents the attempt of his daughter or his granddaughter to find for herself new alignments in a new world. But his dissent from progress is not effective any more than conservatism is ever effective in hampering progress. Changes occur in spite of country-folk. New generations go their own way and it is a way which is very different, producing among their number a new kind of individual, among their communities a different kind of life, and giving them a new relationship to the nation as a whole.

## 6. *Education in Country Life*

One of the reasons why rural education has been hitherto so very backward is that rural life has always been so very much

simpler and less complicated than city life and therefore has called for less training in preparation for it. In a simple rural economy where most of the tasks are done by hand and where most of the processes are of the sort that are carried on in traditional ways by methods that are passed down from father to son, very little book learning is necessary. The newer methods of production in agriculture, the new social organization, the different kinds of amusements, and the new mutual relations between country and city have changed all this and have created a new necessity for a real rural educational system. Only a beginning has been made so far, but it is a splendid beginning, and promises as rapid a fruition as popular education has had in city life in the past two generations. Here again the automobile and the improved roads have influenced the situation. They have made it possible for children to go longer distances from home to school and this has meant that larger groups could be built up and larger groups can have an institution of the kind that could never be built up in the "little red schoolhouse" of tradition.

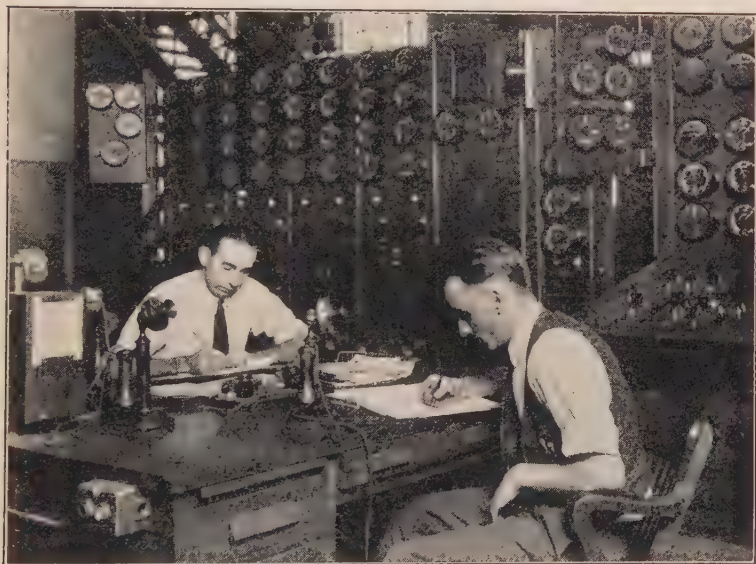
The farm is rapidly becoming mechanized in the United States. Tractors and other complicated machines are beginning to be used to fit the soil, other machines are used for cultivation and yet more complicated ones engaged in harvesting. Dairy farms use milking machines, wood is sawed by power; in fact most of the processes of work that had to be done a generation ago by sheer physical strength of man and beast may now be performed with the ease that machinery performs all its tasks. Farm work needs no longer tax the strength and endurance of men. It taxes rather their qualities of cleverness and intelligence. Cleverness and intelligence can only be brought to full development in an educational system which aims specifically at that end. Apprenticeship on the farm without "going to school" is no longer sufficient.

### *7. City Dwellers on the Comfort Level*

Above the penniless unskilled laborer in a large factory are foremen and skilled artisans of various sorts, machinists, carpenters, and electricians, together with a corps of office workers, clerks, bookkeepers, and stenographers. They in turn are directed by petty officials, sales and advertising managers, heads and sub-heads of departments. Miscellaneous experts are fitted in as



auditors, attorneys, and the like, or consulted when necessary on payment of a special fee. In the town around are doctors, clergymen, school teachers, working as private professional men or in the pay of business houses or municipalities. A cluster of banks, shops, restaurants, laundries, and other small enterprises will be found on the outskirts of the factory districts, and scattered



Switchboard operator and assistant in the control room of a power station.

They are typical members of the group which makes up our city "comfort dwellers"—typical in the kind of work they do and the kind of things they have to use. (Photo Hine)

through the residential streets. Most of the men who carry on these activities, and many more, with their families, go to make up the vast intermediate strata of our urban economic life. We may class them in general, along with the prosperous farmer, on the comfort level, because of the quality of the work they do and the quality of the goods they receive for it.

#### 8. *Their Incomes*

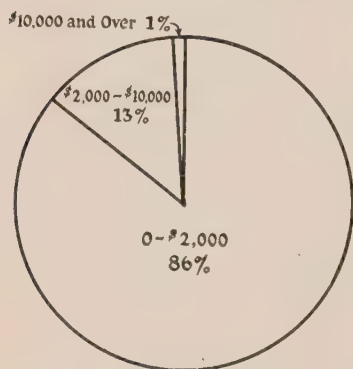
In order to maintain a comfort standard, the family must continuously receive a money income that enables it to buy the



necessary goods and services involved. Much study has been given to the problem of determining the sums of money required for the comfort standard, some of which has been summarized in the last chapter. Once more it must be emphasized that the subject is not capable of exact statistical exposition since the amount and quality of goods considered necessary for comfort is largely a matter of subjective feeling or arbitrary decision. Furthermore, the facts involved are so complex and constantly changing

(because of price levels and other variables) that no comprehensive survey has yet been made.

If we select arbitrarily some figure, say \$2000 a year, as representing the minimum income for a comfort standard (though, perhaps, \$2500 would be a better figure), it is easy to estimate what proportion of families come up to that standard. In 1918 only 14% of the total number of incomes in the United States amounted to \$2000 or more. In 1922, out of nearly seven million taxable incomes, 2,129,898 were between two and three thousand dollars; 758,267 between three and four thousand; 404,848 between four and five thousand, and 391,373 between five and ten thousand.



The apportionment of our national income. An income of \$2000 does not imply abject poverty; but it implies considerable restriction of expenditure, and on the whole the deprivation of many goods people would be better for having. (Based on statistics of the National Bureau of Economic Research)

About three and a half million incomes, then, were taxed as between \$2000 and \$10,000. This amounts to a little over half the total number of taxable incomes, and about one-eleventh of the estimated total number of incomes in the United States. The vast majority, of course, are not only below this level but below the minimum for taxation.

### 9. *Their Expenditures*

What will such an income buy? That depends, of course, on the prices in force at a particular time and in a particular locality,

and on the skill with which the income is expended. The question is therefore not capable of a definite answer. But there are many fragmentary studies which are helpful in forming an estimate, based on special cases and small groups which are considered by experienced investigators as fairly typical of the country at large. If allowance is made for the unreliability of the small number of cases, and for variations of time and place, such studies may be consulted to advantage.

In 1918-19, for example, the Department of Labor gathered statistics on over twelve thousand families in 92 industrial centers, which give some idea of the way income is divided on the comfort level. To the poorer of these families we have already referred in the last chapter. The two highest income groups we may call here F and G; the former, including 705 families, averaged \$2272.18; the latter, including 353 families, averaged \$2790.25. Group F averages 5.7 persons to the family; group G 6.4 persons; the equivalent in adult males being 4.09 and 4.95. On the average, group F spent in a year on food \$711.86; G spent \$859.98. On clothing, F spent \$384.20; G spent \$503.03. On rent, F spent \$248.35; G spent \$260.21. On other and total expenses, F spent \$2054.97; G spent \$2466.91. At the end of the year, 585 families in group F had suprluses averaging \$290.65, and 102 had deficits averaging \$165.58. In group G, 306 had surpluses averaging \$404.45; 45 had deficits averaging \$213.81. The figures are completely represented in an accompanying table.

INCOME GROUP	No. of Families	AVERAGE PERSONS IN FAMILY		AVERAGE YEARLY EXPENSES PER FAMILY FOR				SURPLUS		DEFICIT	
		Total	Equivalent Adult Males	Food	Clothing	Rent	Other and Total	Families Having	Average Amount	Families Having	Average Amount
Under \$900 . . . . .	332	4.3	2.89	\$371.61	\$111.63	\$121.65	\$842.91	137	\$47.59	144	\$114.48
\$900 and under \$1,200 . . . . .	2,423	4.5	2.98	456.16	456.45	149.63	1,076.12	1,306	67.62	838	107.39
\$1,200 and under \$1,500 . . . . .	3,959	4.7	3.16	515.56	206.50	179.73	1,300.71	2,731	106.27	977	122.48
\$1,500 and under \$1,800 . . . . .	2,730	5.0	3.36	571.75	257.38	207.13	1,536.68	2,112	157.74	525	141.32
\$1,800 and under \$2,100 . . . . .	1,594	5.1	3.59	626.52	306.94	231.92	1,755.74	1,315	232.41	240	155.57
\$2,100 and under \$2,500 . . . . .	705	5.7	4.09	711.86	384.20	248.35	2,054.97	585	290.65	102	165.68
\$2,500 and over . . . . .	353	6.4	4.95	859.98	503.03	260.21	2,466.91	306	404.45	45	213.81
All incomes	12,096	4.9	3.32	548.51	237.60	186.55	1,434.37	8,492	155.31	2,871	126.85

For further and more specific illustration, we may take an article by Anna Rochester on the expenditure of eleven typical families on the comfort level.<sup>1</sup> Their budgets, though beyond the reach of the average wage-earner, may perhaps be taken as representative of the outlay considered essential by families of

<sup>1</sup> "What Eleven Families Spend," in *The World Tomorrow*, June, 1922.

moderate wealth. Since the figures are not to be taken as exact, we may disregard the variations (not extremely large) in prices from locality to locality and from year to year.

The fathers of families who contributed figures were mostly professional men: an engineer, a social worker, a lawyer, a teacher, and six writers and organizers in the field of social activity; one was a business man. Five states were represented; Georgia, Connecticut, New York, Pennsylvania, and New Jersey. In every



case, both the father and mother were living and there was at least one child. None of the children was more than eleven years old, and no family had more than four children. Eight families who gave their total expenditures during twelve months reported amounts (exclusive of contributions, savings, life insurance and income taxes) from \$2139 in a family with one child to \$7209 in a family of three children and

The interior of a modern home, the furnishing and maintenance of which is dependent upon a regular money income. (Courtesy N. Y. Edison Co.)

three adults. The expenses were divided into three headings; housing, food and clothing, and other expenditures.

Housing conditions were varied, including apartments, semi-detached houses, and houses with windows on all sides. All except the smallest apartment, where four persons lived in four rooms and bath, had a margin of space beyond the one room per person which is the standard given in the "minimum for health and decency" budget of the U. S. Bureau of Labor Statistics. Three families owned their homes, three were buying their homes on some part-payment plan, and five paid rent. The three families owning their homes reported actual expenditure during the year for such

items as taxes, repairs, insurance, and interest on mortgage plus fuel and commutation, ranging from \$400 to \$1104.50. The payments toward the purchase of the dwelling, including also fuel and commutation, ranged in the second group of three families from \$618.02 to \$1530. The lowest rent was paid for a five-room-and-bath apartment in a model tenement in New York. The highest, \$1128.25 including fuel and commutation, was paid for a detached suburban dwelling near New York. Since more space was used than the minimum for health and decency, more household equipment was needed, and more expenditure for renewals, upkeep, and household supplies than is included in any minimum budget. In its most generous budget, the Bureau of Labor Statistics included a total of \$206.92 for three items: upkeep of house, furniture and furnishings, \$70; laundry work, \$104; and cleaning supplies and services, \$32.92. In each case but one of the eleven, the total family expense for these items exceeded this minimum estimate, in spite of the increased purchasing power of the dollar in 1921 over the 1919 prices on which the bureau's figures were based.

For food, the annual expenditures in four families were between \$775 and \$800 a year. Each of these families had one or two children, all under eight years of age. The other family of only four persons had two children seven and ten years old and spent \$861.65. A family with two full-time wage-earners and four children spent \$1460, and one with one full-time wage-earner and three children spent \$1887. Reckoning all ages alike, the average monthly expenditures ranged from \$15.21 in a Georgia town to \$37.50 in a suburb of New York. In the estimated "health and decency" minimum for a government employee's family in Washington in 1919, the food allowance for a family of father, mother, boy of eleven, girl of five, and boy of two, was \$773.93, or a monthly average of \$12.85 per person. The clothing expenditure for parents and children ranged from \$270 to \$780; in the case of four families it followed very closely the minimum budget, and in no case greatly exceeded it.

"The remaining expenditures," remarks the author, "for such things as recreation, books, schooling, travel, medical care, presents, plants and flowers, and sundries mark perhaps the greatest differences between the minimum standard and a way of living



which is simple but comfortable. The minimum budget allows less than 50 cents a week for amusements, and no vacation; it allows for newspapers \$8.40 a year, but nothing for books or school fees. For travel it allows \$45 during the year, including all carfares. For 'labor organization' which perhaps might be added to amusements or to education it allows \$10 a year. For health care the minimum budget allows \$80 during the year. Incidentals are estimated at one dollar a week. For all these items together, including labor organization, the minimum budget allowed \$215.40 in 1919." In the eleven families, the amounts spent for school, travel, recreation, books, presents, plants and flowers, and sundries, varied from \$184.26 in a family with two small children, living in the country, to \$1211 in a suburban family with three children. The second largest amount spent for these items was the \$906.83 reported by a family with less than \$3000 total expenditure.

"Even the simplest of these eleven budgets," the article concludes, "is more generous than the 'minimum of health and decency' budget suggested by the Bureau of Labor Statistics. This, in turn, is above the average actually available for families in the United States. It is far above the earnings of the coal miners. . . . It is far above the average earnings of railroad workers.<sup>1</sup> It is far above the average income and still farther above the median income of all persons having an income whether from wages or any other source whatever in the United States."

#### 10. *Emulation of the Rich*

We may imagine a typical family on the comfort level as occupying an apartment in the city of some two to ten rooms, according to its size and income, or, in town or suburb, a small house and garden. If it is like most families, it is anxious that the house or apartment be as near as possible to the streets where the rich and fashionable live and that its appearance and furnishing, inside and out, resemble theirs. Of course such things are partly desired for their own sake, not only to keep up appearances: motives of valuation are too complex and variable to be grouped under any single formula. But it is substantially true that the desires

<sup>1</sup> Cf. *Are Wages Too High?* by Basil M. Manly, published by the People's Legislative Service, Washington, D. C., 1922.



of people on any level are inspired in large part by observing the possessions and enjoyments of the more fortunate. Among these possessions not the least attractive are the respect of others, and a certain easy self-confidence which goes with assured financial and social position. Ways of living on the comfort level are therefore considerably influenced by the desire to appear like the rich, and to command the respect which they do, as well as by the intrinsic attractiveness of their goods and activities. Whether or not we feel this motive to be a worthy one, we must reckon with it as a psychological and economic fact. It is intangible and hard to measure, but undeniably operative in influencing both the ways people spend money and the ways they earn it.

Possessions go far to create a social rating for the family in places where distinctions of birth are few and precarious. For this reason a family on the comfort level will often sacrifice much—perhaps even mortgage its house—to possess an automobile of respected make, not only because it enjoys riding, but because a wealthier neighbor has one. Its members will be fashionably dressed, in expensive fabrics, in styles imitative of London tailors and Parisian dressmakers, and its women will carry as many jewels as is consistent with their purses and the prevailing standards of good form.

In larger cities, the desire to keep up appearances is on the whole less keen, because of the city's great impersonality; in the constantly shifting crowds demarcations of social groups and the comparative standards of their members are less sharp and conspicuous. Private automobiles, large houses, and entertainment in them are not so necessary. But there is always present the desire to move into a larger, better located, and better furnished apartment, and to enjoy more of the city's expensive amusements: its operas, theaters, and brilliant restaurants.

### *11. Town and Suburban Amusements*

In a town of smaller size, there are sure to be attempts at stratification into social classes—a banding together of the older residents, who have possessed their incomes longer. Newcomers, and families who have but lately risen to prosperity, may be admitted reluctantly on rather vague qualifications, a compound, perhaps, of money, generosity in entertaining, good manners,

and personal amiability. A nucleus of families who have so qualified usually form, sooner or later, some sort of country club, which becomes the chief center of social life. A few years ago, this function was exercised by the local church, where members lingered to talk after service, and where picnics and social evenings were arranged. These still persist, but they are being overshadowed by the more urbane festivities of the country club, where there is less restraint in the atmosphere and more facilities for ex-



A country club. One of the leading social centers for members of the comfort group. (© Ewing Galloway)

cluding undesired associates. There will be frequent dances for the younger set, convivial poker parties for the married men, and bridge for their wives. Tennis courts and golf links adjoining the club, or a garden plot around the adjacent homes, provide relaxation

from the stresses of the productive life. At times exclusiveness will be forgotten, and the whole town go out to cheer its local baseball team, or flock to the moving-picture theater when a popular star is advertised, stopping afterwards at the corner drug store for an ice-cream soda and an hour of friendly conversation. Occasional visits of a barnstorming theatrical troupe or in the summer a traveling Chautauqua vary the round of amusements. Some group of residents, perhaps a women's club, usually attempts to raise the town's intellectual level by obtaining concerts and lectures of a higher order, by providing a library and organizing a book study club.

## 12. *Women's Work*

The activities of women on the intermediate level are increasingly uncertain and changing in present-day society. The wife

of today is somewhat perplexed to find that the household duties which occupied her grandmother's day are mostly done for her. Sewing is only a pastime, for the clothes of the family can be bought ready-made, or made to order, better and more cheaply than she could make them. Sweeping and cleaning are reduced to a minimum by small apartments and labor-saving devices. Heating and lighting are attended to by janitors, or by municipal utility corporations. Even cooking is a shorter task, for most of the articles come to her nearly ready for the table, or entirely so, in tins and sealed boxes. To a constantly greater extent she can rely upon the near-by restaurant, caterer or delicatessen store for well cooked meals at small cost. Her children are taken away for most of the day to school, where the work of training their minds and habits is intrusted to specialists; and after school they are quickly got off to a playground or moving-picture theater. A woman of the poorer class must continue to do some of these tasks herself, and if there is time also go out and earn money to supplement an always meager income. But the fairly prosperous husband is more than ready to spare his wife every task, not only from affection but as a mark of his own financial success. So she is left with steadily increasing leisure, and, in the absence of customs and traditions for guides, with no clear ideas concerning what to do with it. Among women's clubs and informal groups are to be found, naturally, both idle gossip and movements for civil and intellectual advance.

Every year greater numbers of women are entering occupations formerly confined to men, and new careers are being opened up to them: not only in teaching, acting, and subordinate business



Vacuum sweepers, run by electricity, are one of the many new devices which have lightened the task of housekeeping. (Courtesy N. Y. Edison Co.)

positions, where they have long been active, but in law, medicine, and executive business capacities, the number of women is rapidly increasing. They are among our most successful novelists, poets,



A small modern kitchen—showing devices for making this “most used room” a more efficient working place. (Courtesy N. Y. Edison Co.)

painters, and musicians. We have hardly begun to realize the problems to which this tendency gives rise: problems not only of the future of home and family, but of a nature that affects industrial technology. Women everywhere are asking for equal pay for equal work; they demand to be received on equal

competitive conditions with men (although many favor regulations protecting them from too severe competition).

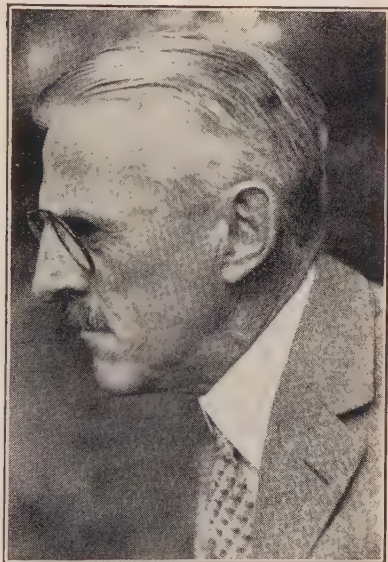
### 13. *Men's Work; the Struggle to Keep Up a Standard*

The occupations of men on this financial plane are of course limitless in variety; we need not stop to consider any of them specifically. These are the men who direct the army of manual laborers, and are themselves directed by men of greater wealth and superior industrial position: the skilled craftsmen, small administrators and shopkeepers, professional men, technicians, scientists, artists, writers, some of them parts of the industrial machine, and some free lances who are more or less outside it. In these occupations are to be found every degree of scope for originality and development: an outlet for every human capacity. But it must not be supposed that attainment of the comfort level is a guarantee of economic and intellectual freedom, that economic progress would reach its limit if every one were brought up to this level. The struggle to “make ends meet” does not



cease when a family rises out of the poverty class; often it is intensified. Desires and ambitions increase more rapidly than income. Things seem necessities which before were luxuries, for it is a human characteristic to fight stubbornly for the preservation of a standard of living once attained. As a family comes nearer to the level of affluence, its members become more and more conscious of small differences between its standard and their own.

So, inability to give his son a college education may be, to a professional man, a keener disappointment than a day laborer would suffer if his son had to go without any schooling at all. To a business man success or failure in life, with all its consequent self-respect or shame, depends on doing as well financially as he has been expected to do: on keeping up with those who were his equals in college, on being able to buy for his wife the luxuries her friends enjoy and on being able to maintain all the trivial but costly appurtenances of the group. Thus the desire to keep up a standard—in goods and appearances if not in character and intellect—impels many



A member of the professional group—neither tired *of* his job nor tired *by* it; still keen and alert, his greatest usefulness just beginning at an age when wage-working men and women are beginning to wonder what luck old age holds in store for them. (Photo Hine)

men to sacrifice their most precious ambitions and to enter upon careers that promise greater money-making chances. There they will work with anxious intensity until senility overtakes them, their youthful dreams forgotten, never satisfied with moderate wealth. And, if financial reverses come, they are plunged into a despair that often finds no other release than suicide.

Obviously there are two ways of avoiding such unhappiness: either to get more wealth or to be satisfied with less, and to use



that less more effectively. The second, perhaps the more important, is a matter for ethical consideration, through the attainment of a rational estimate of the values of life; it forms the background of our consideration of the problems of consumption later on. But much can be done along the first line as well, and it is a special task of ours to consider in this book the ways in which material means to happiness may be made more available for all.<sup>1</sup>

#### 14. *Obstacles to Growth*

It must not be supposed, furthermore, that work on the comfort level offers all the opportunities for mental development that it might conceivably offer. Even the men who seem to be devoting their lives most purely to creation in art and science are usually hampered at every turn by economic difficulties. The finest developments of civilization are often the easiest to get along without. They fail, in competition for financial support, against the appeal of better food and clothing, or even tawdry luxuries. If the artist would enjoy the comforts of life, the means to his own leisure and education, he may be forced to sacrifice sincerity and his highest ideals, to secure the favor of an ignorant patron, a commercial enterprise, or a capricious public. It is a part of economic progress to arrange, therefore, for the free development of culture: shall it be on a competitive level, or subsidized by society; and if it is to be supported, how and to what extent shall it be done? These are questions to which there is no obvious or easy answer and none can be attempted here; but certainly the finest flower of civilization ought not to be forced into competition with its rank weeds just because of their hardier growth.

In professional work, and still more so in industry, intellectual and esthetic abilities are apt to be slowly smothered by the way in which work is carried on—doubtless less inevitably than on the poverty level, but still with too great frequency. Some parts of our industrial system—for instance retail trading—are still largely disorganized and individualistic. There are few rules of the game, and wealth goes to the survivor of a ruthless, catch-as-catch-can struggle. Such struggle develops, it is true, certain qualities valuable to society and the man himself: shrewd clear-

<sup>1</sup> See Books II, III, and IV following.

headedness, energy, resourcefulness. Modern civilization perhaps owes something to the bitter competition of the past. But it is distinctively not favorable to certain other good qualities, to refinement of emotion and abstract thought, to a spirit of unselfish good will toward society in general. It is an insatiable devourer of a man's time and energy, forcing him to give up one by one the humane interests of his youth and to risk all his resources in the battle for power and money.

Where industry is highly organized, as it is in rapidly increasing



A musician in his studio—genius is not always permitted such favorable surroundings. (Photo Hine)

areas, a new set of dangers arises. Not only is there still keen rivalry for advancement on the basis of qualities which may not always be morally best; but such industry tends to be mechanized, reduced to exactly repetitive ways of doing things. "Red tape" is sometimes thought of as existing only in government work; in reality it follows upon the mechanization of tasks anywhere. Originality in subordinates is less to be desired than faithful performance of a set task and endurance in sticking to a tedious routine job. For the clerk, accountant, department manager, hardly less than for the manual laborer, work is becoming specialized, cut-and-dried, monotonous. This has its merits, as we shall see, in increasing society's productive efficiency, but it is not educative, in a

large sense, to the individual. Real economic progress, therefore, must find some way to combat the deadening influence of industrial routine, either through controlling methods of work or through increasing opportunities for productive leisure, or through both.<sup>1</sup>

### 15. Babbitt: *A Picture of Urban Comfort-Level Life*

Mr. Sinclair Lewis has written the epic of comfort life in urban America. In *Babbitt*<sup>2</sup> he does not fail to dwell upon the possibilities that are inherent in the comfort income; but he bears down rather hard upon the raw newness of the culture comfort incomes have so far developed in America. His Zenith is a typical small-large industrial and trading city; George F. Babbitt, one of its typical comfort-level citizens. As good a picture of the advantages as well as the rawness of our Babbitts is drawn there as could be constructed. Following are certain passages from the book that are germane to our discussion of this area of life:

Though the house was not large it had, like all houses on Floral Heights, an altogether royal bathroom of porcelain and glazed tile and metal sleek as silver. The towel-rack was a rod of clear glass set in nickel. The tub was long enough for a Prussian Guard, and above the set bowl was a sensational exhibit of toothbrush holder, shaving-brush holder, soap-dish, sponge-dish, and medicine-cabinet, so glittering and so ingenious that they resembled an electrical instrument-board. . . .

The [bed] room displayed a modest and pleasant color-scheme, after one of the best standard designs of the decorator who "did the interiors" for most of the speculative-builders' houses in Zenith. The walls were gray, the woodwork white, the rug a serene blue; and very much like mahogany was the furniture—the bureau with its great clear mirror, Mrs. Babbitt's dressing-table with toilet-articles of almost solid silver, the plain twin beds, between them a small table holding a standard bedside book with colored illustrations—what particular book it was cannot be ascertained, since no one had ever opened it. The mattresses were firm but not hard, triumphant modern mattresses which had cost a great deal of money; the hot-water radiator was of exactly the proper scientific surface for the cubic contents of the room. The windows were large and easily opened, with the best catches and cords, and Holland roller-shades guaranteed not to crack. It was a masterpiece among bedrooms, right out of *Cheerful Modern Houses for Medium Incomes*. . . .

The Babbitts' house was five years old. It was all as competent and

<sup>1</sup> These are discussed in Chapter 18 below.

<sup>2</sup> Harcourt, Brace and Company, 1922. The following quotations are used by permission.

glossy as this bedroom. It had the best of taste, the best of inexpensive rugs, a simple and laudable architecture, and the latest conveniences. Throughout, electricity took the place of candles and slatternly hearth-fires. Along the bedroom baseboard were three plugs for electric lamps, concealed by little brass doors. In the halls were plugs for the vacuum cleaner, and in the living-room plugs for the piano lamp, for the electric fan. The trim dining-room (with its admirable oak buffet, its leaded-glass cupboard, its creamy plaster walls, its modest scene of a salmon expiring upon a pile of oysters) had plugs which supplied the electric percolator and the electric toaster. . . .

To George F. Babbitt, as to most prosperous citizens of Zenith, his motor car was poetry and tragedy, love and heroism. The office was his pirate ship but the car his perilous excursion ashore.

Among the tremendous crises of each day none was more dramatic than starting the engine. It was slow on cold mornings; there was the long, anxious whir of the starter; and sometimes he had to drip ether into the cocks of the cylinders, which was so very interesting that at lunch he would chronicle it drop by drop, and orally calculate how much each drop had cost him.

This morning he was darkly prepared to find something wrong, and he felt belittled when the mixture exploded sweet and strong, and the car didn't even brush the door-jamb, gouged and splintery with many bruising by fenders, as he backed out of the garage. He was confused. He shouted "Morning!" to Sam Doppelbrau with more cordiality than he had intended.

Babbitt's green and white Dutch Colonial house was one of three in that block on Chatham Road. To the left of it was the residence of Mr. Samuel Doppelbrau, secretary of an excellent firm of bathroom-fixture jobbers. His was a comfortable house with no architectural manners whatever; a large wooden box with a squat tower, a broad porch, and glossy paint yellow as a yolk. Babbitt disapproved of Mr. and Mrs. Doppelbrau as "Bohemian." From their house came midnight music and obscene laughter; there were neighborhood rumors of bootlegged whisky and fast motor rides. They furnished Babbitt with many happy evenings of discussion, during which he announced firmly, "I'm not strait-laced, and I don't mind seeing a fellow throw in a drink once in a while, but when it comes to deliberately trying to get away with a lot of hell-raising all the while like the Doppelbraus do, it's too rich for my blood!"

On the other side of Babbitt lived Howard Littlefield, Ph.D., in a strictly modern house whereof the lower part was dark red tapestry brick, with a leaded oriel, the upper part of pale stucco like spattered clay, and the roof red-tiled. Littlefield was the Great Scholar of the neighborhood; the authority on everything in the world except babies, cooking, and motors. He was a Bachelor of Arts of Blodgett College, and a Doctor of Philosophy in economics of Yale. He was the employment-manager and publicity-counsel of the Zenith Street Traction Company. He could, on



ten hours' notice, appear before the board of aldermen or the state legislature and prove, absolutely, with figures all in rows and with precedents from Poland and New Zealand, that the street-car company loved the Public and yearned over its employees; that all its stock was owned by Widows and Orphans; and that whatever it desired to do would benefit property-owners by increasing rental values, and help the poor by lowering rents. All his acquaintances turned to Littlefield when they desired to know the date of the battle of Saragossa, the definition of the word "sabotage," the future of the German mark, the translation of "*hinc illæ lacrimæ*," or the number of products of coal tar. He awed Babbitt by confessing that he often sat up till midnight reading the figures and footnotes in Government reports, or skimming (with amusement at the author's mistakes) the latest volumes of chemistry, archeology, and ichthyology. . . .

A stranger suddenly dropped into the business-center of Zenith could not have told whether he was in a city of Oregon or Georgia, Ohio or Maine, Oklahoma or Manitoba. But to Babbitt every inch was individual and stirring. As always he noted that the California Building across the way was three stories lower, therefore three stories less beautiful, than his own Reeves Building. As always when he passed the Parthenon Shoe Shine Parlor, a one-story hut which beside the granite and red-brick ponderousness of the old California Building resembled a bath-house under a cliff, he commented, "Gosh, ought to get my shoes shined this afternoon. Keep forgetting it." At the Simplex Office Furniture Shop, the National Cash Register Agency, he yearned for a dictaphone, for a typewriter which would add and multiply, as a poet yearns for quartos or a physician for radium.

At the Nobby Men's Wear Shop he took his left hand off the steering-wheel to touch his scarf, and thought well of himself as one who bought expensive ties "and could pay cash for 'em, too, by golly"; and at the United Cigar Store, with its crimson and gold alertness, he reflected, "Wonder if I need some cigars—idiot—plumb forgot—going t' cut down my fool smoking." He looked at his bank, the Miners' and Drovers' National, and considered how clever and solid he was to bank with so marbled an establishment. His high moment came in the clash of traffic when he was halted at the corner beneath the lofty Second National Tower. His car was banked with four others in a line of steel restless as cavalry, while the crosstown traffic, limousines and enormous moving-vans and insistent motor-cycles, poured by; on the farther corner, pneumatic riveters rang on the sun-plated skeleton of a new building; and out of this tornado flashed the inspiration of a familiar face, and a fellow Booster shouted, "H' are you, George!" Babbitt waved in neighborly affection, and slid on with the traffic as the policeman lifted his hand. He noted how quickly his car picked up. He felt superior and powerful, like a shuttle of polished steel darting in a vast machine.

As always he ignored the next two blocks, decayed blocks not yet reclaimed from the grime and shabbiness of the Zenith of 1885. While



he was passing the five-and-ten-cent store, the Dakota Lodging House, Concordia Hall with its lodge-rooms and the offices of fortune-tellers and chiropractors, he thought of how much money he made, and he boasted a little and worried a little and did old familiar sums:

"Four hundred fifty plunks this morning from the Lyte deal. But taxes due. Let's see: I ought to pull out eight thousand net this year, and save fifteen hundred of that—no, not if I put up garage and— Let's see: six hundred and forty clear last month, and twelve times six-forty makes—makes—let's see: six times twelve is seventy-two hundred and— Oh, rats, anyway, I'll make eight thousand—gee, now, that's not so bad; mighty few fellows pulling down eight thousand dollars a year—eight thousand good hard iron dollars—bet there isn't more than five per cent of the people in the whole United States that make more than Uncle George does, by golly! Right up at the top of the heap! But— Way expenses are— Family wasting gasoline, and always dressed like millionaires, and sending that eighty a month to Mother— And all these stenographers and salesmen gouging me for every cent they can get—"

The effect of his scientific budget-planning was that he felt at once triumphantly wealthy and perilously poor, and in the midst of these dissertations he stopped his car, rushed into a small news-and-miscellany shop, and bought the electric cigar-lighter which he had coveted for a week. He dodged his conscience by being jerky and noisy, and by shouting at the clerk, "Guess this will prett' near pay for itself in matches, eh?"

It was a pretty thing, a nickeled cylinder with an almost silvery socket, to be attached to the dashboard of his car. It was not only, as the placard on the counter observed, "a dandy little refinement, lending the last touch of class to a gentleman's auto," but a priceless time-saver. By freeing him from halting the car to light a match, it would in a month or two easily save ten minutes.

As he drove on he glanced at it. "Pretty nice. Always wanted one," he said wistfully. "The one thing a smoker needs, too." . . .

The Zenith Athletic Club is not athletic and it isn't exactly a club, but it is Zenith in perfection. It has an active and smoke-misted billiard room, it is represented by baseball and football teams, and in the pool and the gymnasium a tenth of the members sporadically try to reduce. But most of its three thousand members use it as a café in which to lunch, play cards, tell stories, meet customers, and entertain out-of-town uncles at dinner. It is the largest club in the city, and its chief hatred is the conservative Union Club, which all sound members of the Athletic call "a rotten, snobbish, dull, expensive old hole—not one Good Mixer in the place—you couldn't hire me to join." Statistics show that no member of the Athletic has ever refused election to the Union, and of those who are elected, sixty-seven per cent resign from the Athletic and are thereafter heard to say, in the drowsy sanctity of the Union lounge, "The Athletic would be a pretty good hotel, if it were more exclusive."

The Athletic Club building is nine stories high, yellow brick with glassy

roof-garden above and portico of huge limestone columns below. The lobby, with its thick pillars of porous Caen stone, its pointed vaulting, and a brown glazed-tile floor like well-baked bread-crust, is a combination of cathedral crypt and rathskellar. The members rush into the lobby as though they were shopping and hadn't much time for it. Thus did Babbitt enter, and to the group standing by the cigar-counter he whooped, "How's the boys? How's the boys? Well, well, fine day!" . . .

The entrance lobby of the Athletic Club was Gothic, the washroom Roman Imperial, the lounge Spanish Mission, and the reading-room in Chinese Chippendale, but the gem of the club was the dining-room, the masterpiece of Ferdinand Reitman, Zenith's busiest architect. It was lofty and half-timbered, with Tudor leaded casements, an oriel, a somewhat musicianless musicians' gallery, and tapestries believed to illustrate the granting of Magna Charta. The open beams had been hand-adzed at Jake Offutt's car-body works, the hinges were of hand-wrought iron, the wainscot studded with handmade wooden pegs, and at one end of the room was a heraldic and hooded stone fireplace which the club's advertising-pamphlet asserted to be not only larger than any of the fireplaces in European castles but of a draught incomparably more scientific. It was also much cleaner, as no fire had ever been built in it. . . .

Chum Frink had recently been on a lecture-tour among the small towns, and he chuckled, "Awful good to get back to civilization! I certainly been seeing some hick towns! I mean—Course the folks there are the best on earth, but, gee whiz, those Main Street burgs are slow, and you fellows can't hardly appreciate what it means to be here with a bunch of live ones!"

"You bet!" exulted Orville Jones. "They're the best folks on earth, those small-town folks, but, oh, mama! what conversation! Why, say, they can't talk about anything but the weather and the ne-oo Ford, by heckalorum!"

"That's right. They all talk about just the same things," said Eddie Swanson.

"Don't they, though! They just say the same things over and over," said Vergil Gunch.

"Yes, it's really remarkable. They seem to lack all power of looking at things impersonally. They simply go over and over the same talk about Fords and the weather and so on," said Howard Littlefield.

"Still, at that, you can't blame 'em. They haven't got any intellectual stimulus such as you get up here in the city," said Chum Frink.

"Gosh, that's right," said Babbitt. "I don't want you highbrows to get stuck on yourselves but I must say it keeps a fellow right up on his toes to set in with a poet and with Howard, the guy that put the con in economics! But these small-town boobs, with nobody but each other to talk to, no wonder they get so sloppy and uncultured in their speech, and so balled-up in their thinking!"

Orville Jones commented, "And, then take our other advantages—the movies, frinstance. These Yapville sports think they're all-get-out if

they have one change of bill a week, where here in the city you got your choice of a dozen diff'rent movies any evening you want to name!"

"Sure, and the inspiration we get from rubbing up against high-class hustlers every day and getting jam full of ginger," said Eddie Swanson.

"Same time," said Babbitt, "no sense excusing these rube burgs too easy. Fellow's own fault if he doesn't show the initiative to up and beat it to the city, like we done—did. And, just speaking in confidence among friends, they're jealous as the devil of a city man. Every time I go up to Catawba I have to go around apologizing to the fellows I was brought up with because I've more or less succeeded and they haven't. And if you talk natural to 'em, way we do here, and show finesse and what you might call a broad point of view, why, they think you're putting on side. There's my own half-brother Martin—runs the little ole general store my Dad used to keep. Say, I'll bet he don't know there is such a thing as a Tux—as a dinner-jacket. If he was to come in here now, he'd think we were a bunch of—of— Why, gosh, I swear, he wouldn't know what to think! Yes, sir, they're jealous!"

Chum Frink agreed, "That's so. But what I mind is their lack of culture and appreciation of the Beautiful—if you'll excuse me for being highbrow. Now, I like to give a high-class lecture, and read some of my best poetry—not the newspaper stuff but the magazine things. But say, when I get out in the tall grass, there's nothing will take but a lot of cheesy old stories and slang and junk that if any of us were to indulge in it here, he'd get the gate so fast it would make his head swim."

Vergil Gunch summed it up: "Fact is, we're mighty lucky to be living among a bunch of city-folks, that recognize artistic things and business-punch equally. We'd feel pretty glum if we got stuck in some Main Street burg and tried to wise up the old codgers to the kind of life we're used to here. But, by golly, there's this you got to say for 'em: Every small American town is trying to get population and modern ideals. And darn if a lot of 'em don't put it across! Somebody starts panning a rube cross-roads, telling how he was there in 1900 and it consisted of one muddy street, count 'em, one, and nine hundred human clams. Well, you go back there in 1920, and you find pavements and a swell little hotel and a first-class ladies' ready-to-wear shop—real perfection, in fact! You don't want to just look at what these small towns are, you want to look at what they're aiming to become, and they all got an ambition that in the long run is going to make 'em the finest spots on earth—they all want to be just like Zenith!"

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What is meant by "comfort" as used in this chapter? Do you agree with this usage? Are there any significant differences between "rural comfort" and "urban comfort"?

2. To what extent are such factors as improved roads tending to alter "rural comfort"?

3. Name some of the things which are influencing "urban comforts."

4. Is the same money income of equal value to workers in different parts of the country? From the standpoint of a standard of living would \$2000 per year in New York City be the equal of \$2000 in some New England village? Why? Which would you prefer? Why?

5. Mention some of the ways in which society would benefit if we could bring the poverty groups up to the comfort level. Do you believe it possible?



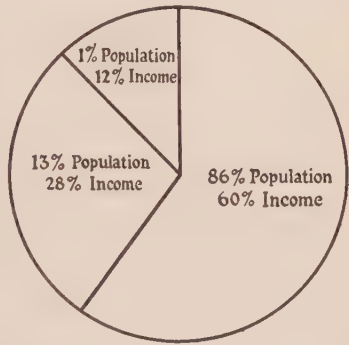
## CHAPTER 5

### RICHES

#### 1. *The Favored Few*

There is of course no way of deciding just where on the scale comfort passes over into riches; and accordingly no way of telling how many rich people there are in the United States. But, once more, if we choose some round figure as representing the minimum income for this standard, it is easy to find how many people come up to or surpass it. In 1918 only three per cent of the total number of incomes in this country were estimated as amounting to \$5000 or above.<sup>1</sup> But within that three per cent were many enormous incomes, so that this small proportion of families enjoyed a considerable share of the national income.

In 1922 four persons (as against one in 1921 and four in 1920) had a taxable income of \$5,000,000 or over; their incomes amounted altogether to over forty-five millions. Five persons had incomes of three to four million; ten had incomes of two to three million; eleven had incomes of one and a half to two million; thirty-seven had incomes of one to one and a half million; thirty-nine had incomes of \$750,000 to \$1,000,000. Sixty-seven had incomes of \$1,000,000 or over. Out of nearly seven million incomes

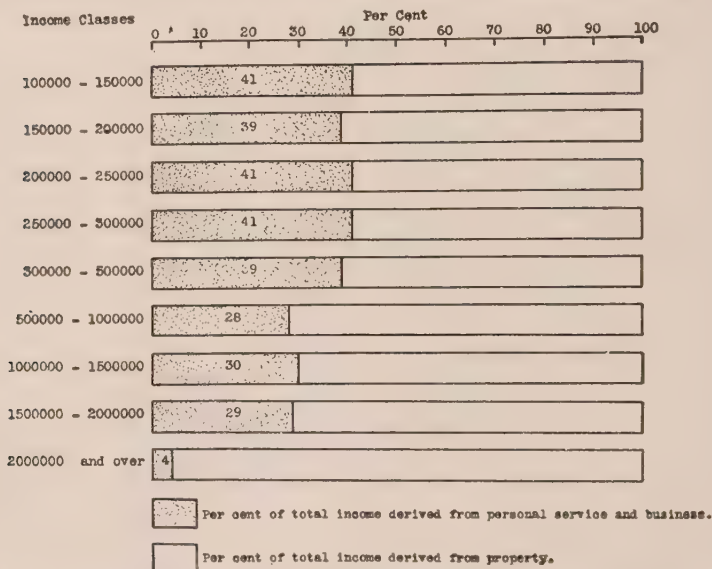


The part of our income that goes to the poor, the comfortable, and the rich. This chart shows that though only one per cent of our people receive incomes of \$10,000 or more (as was shown in a previous chart), this one per cent gets twelve per cent of the income. The thirteen per cent whose incomes range from \$2000 to \$10,000 get twenty-eight per cent of the income. And the receivers of incomes of less than \$2000—eighty-six per cent—get altogether only sixty per cent of the income. There is considerable inequality in the sharing of goods in our country. (Based on official statistics, U. S. Bureau of Internal Revenue, 1918)

<sup>1</sup> *Income in the U. S.*, p. 136.

taxed, about six hundred thousand were \$5000 or over; about two hundred thousand were \$10,000 or over. Estimating thirty-eight millions as the total number of incomes in the United States (including those not taxed), we find that less than two per cent of the incomes were taxed as \$5000 or over; about half of one per cent as \$10,000 or over.

Among the ten men reputed to be the richest in the world, six are Americans: Henry Ford, whose wealth is estimated at \$550,-



This chart implies in general that as incomes increase, the part derived from "earnings" decreases and the part derived from "property" increases. The latter is sometimes called "unearned income." (From *Income in the United States*, by National Bureau of Economic Research)

000,000; John D. Rockefeller, \$500,000,000; Percy Rockefeller, J. B. Duke and George F. Baker, each \$100,000,000. The wealth of the Guggenheim family is figured at \$200,000,000; that of the Vanderbilts at \$75,000,000 to \$100,000,000; of the Astors at \$100,000,000, and of the Mellons at \$75,000,000.

Whatever else is to be inferred from these figures, it is at least clear that the proportion of even moderately wealthy persons in the United States is a very small one, and that an infinitesimal group of families enjoy incomes of overwhelming magnitude.

## 2. Sources of Large Incomes

Few men of large income receive it entirely in one form. It is a safer policy not to keep all one's eggs in one basket, so a person with much money to invest will usually place it in several different enterprises. His stocks, unless he wishes to exert an influence on some one concern, will be scattered among various companies, probably in non-competing fields; some in a copper mine or electric light company. Some of his funds may be invested in the bonds of a municipality, issued for the purpose of some local improvement, or in government bonds. Beside these various stocks and bonds, on which he receives dividends and interest (part of which represents the profits of the various concerns), he may have an interest-bearing account in some bank, in addition to his checking account. He may receive further interest from mortgages on land and houses, and rent from tenants on real estate which he owns outright. In addition he may receive fees as director in one or more companies, and a regular salary as officer in one of them. In the largest incomes, as the following table will show, a relatively small proportion is derived from business, wages, or salaries, a large one from property.

PER CENT OF 1922 PERSONAL INCOMES FROM EACH SOURCE <sup>1</sup>

Income Classes	Wages and Salaries	Business	Partnerships	Profits from Sales of Real Estate, Stocks and Bonds	Capital Net Gain from Sale of Assets More Than Two Years	Rents and Royalties	Interest and Investment Income	Interest on Government Obligations Not Wholly Exempt from Tax	Dividends	Fiduciary	Total Incomes
Under \$1,000 .....	36.81	18.28	3.42	4.15	..	10.98	11.64	0.21	13.49	1.02	100.00
\$1,000 to \$2,000 .....	79.54	7.54	2.08	.72	..	3.77	4.56	.05	1.48	.26	100.00
\$2,000 to \$3,000 .....	74.88	10.03	2.69	1.12	..	4.33	4.82	.05	1.78	.30	100.00
\$3,000 to \$5,000 .....	59.80	16.02	4.84	2.50	..	5.14	6.72	.02	4.46	.50	100.00
\$5,000 to \$10,000 .....	43.97	15.80	7.90	4.79	..	6.17	8.49	.22	11.39	1.27	100.00
\$10,000 to \$25,000 .....	33.91	11.13	9.90	6.28	..	5.65	9.71	.34	20.94	2.14	100.00
\$25,000 to \$50,000 .....	25.30	8.44	11.21	6.23	1.13	4.54	10.03	.42	30.11	2.59	100.00
\$50,000 to \$100,000 .....	18.79	6.20	12.32	4.36	5.29	3.76	9.70	.44	36.25	2.89	100.00
\$100,000 to \$150,000 .....	14.15	4.57	13.57	3.81	7.91	4.05	9.10	.39	39.19	3.26	100.00
\$150,000 to \$300,000 .....	9.48	3.54	13.42	4.38	12.81	3.15	8.51	.38	40.60	3.73	100.00
\$300,000 to \$500,000 .....	6.16	2.87	12.56	3.22	17.55	2.22	6.59	.56	45.41	2.86	100.00
\$500,000 to \$1,000,000 .....	3.42	1.94	6.69	2.48	25.99	2.32	8.09	.30	45.13	3.64	100.00
\$1,000,000 and over .....	2.95	1.48	4.28	2.51	32.60	3.04	4.32	.53	46.99	1.30	100.00
Total .....	55.06	11.42	5.74	2.98	1.00	4.92	6.99	14	10.71	1.04	100.00

## 3. Rich Men's Work and Idleness

We may expect to find him spending his time in a manner appropriate to the ways he receives his income. If he receives no salary or fees for taking part in management, but derives his wealth largely from income on land, there is little call for him to

<sup>1</sup> From *Income in the United States*, by National Bureau of Economic Research.

spend time in business affairs. A solicitor or trust company may manage his estate entirely, collecting rents, ordering repairs on buildings, paying for them and for taxes out of the rents, securing and evicting tenants, and all other details. In that case he has merely to draw checks upon the bank account which will be kept miraculously full for him. If his land was inherited, he may have little or no idea of how it was acquired, or how the present income accumulates. He is free to spend his time at Palm Beach, or lounging about a club with others of his kind. In much the same



The Royal Poinciana Hotel at Palm Beach, a place where rich men idle.  
(© Ewing Galloway)

way he may be freed from responsibility if his wealth is in stocks and bonds: a firm of legal representatives will place his investments, buy and sell either at his direction or on its own initiative, and send him the balance of income after deducting its fees.

Such a situation, however, where the recipient of income does nothing whatever but receive it, is not frequent in America. With the decline of aristocracy, it is much less frequent in Europe than it used to be. It is not considered discreditable for a member of fashionable society in America to take an active part in trade, and few men of energy and force of character are content to spend their time in eternal idleness. The great majority of wealthy men, therefore, take some part in managing the sources of their income and trying to increase it.

This part is often very valuable to society, although it may seem entirely selfish in aim. Of the great American fortunes many, it



is true, were amassed by rapacious or underhanded methods, tricky railroad stock deals, overcharging and frauds upon the public. But many others have come as the result of pioneer work in developing industry; they are the rewards paid by society, in the form of profits and salaries, to its captains of industry for their executive skill, hard work and resourcefulness. Many such men have failed in the struggle against shrewder competitors; others have extorted a reward beyond their deserts; so it is hard to generalize on the extent to which these men have earned their wealth by service to society. But we can say definitely that most of them, whether their activities are good or bad, are not idlers.

#### 4. *Highly Paid Occupations*

Besides the industrial magnates there are other groups of men, numerically small in proportion, whose earnings place them above the comfort class. Popular

moving-picture actors, men, women, and children, have risen to fabulous salaries on the sudden wave of prosperity in the industry. A few professional men, especially corporation lawyers, are richly paid for piloting big business within the existing laws, and for influencing legislation in a way beneficial to their employers. Somewhat smaller rewards, but still generous, go to artists who place their talent at the service of commercial advertising, to the authors of best-selling novels, syndicated newspaper articles and cartoons, and to the editors of successful periodicals. Here and there a scientist, inventor of some useful and salable mechanism, chemical process or medicine, has risen to deserved affluence through the sale of his patent



One of the high-income group. Not all high incomes result from the same activities. This one happens to flow from the talent to entertain. People who can, always seem willing to pay high for amusement. (Photo Underwood and Underwood)

through the sale of his patent

or royalties upon it, or has fought through to success in manufacturing and marketing it himself.

### 5. *Older and Younger Generations*

There is a saying that in America it takes three generations to go from shirt-sleeves to shirt-sleeves; from the building of a fortune out of nothing to the final dissipation of it. This is, of course, extreme and exceptional. But it is quite the ordinary thing, and indeed to be expected, that the inheritor of a large fortune slackens up in energy, fails to build as high above the starting-point as his father did. The typical self-made man is hard-working, abstemious. Unaccustomed in youth to leisure and enjoyment of luxuries, he has no time for them while the struggle is on, and when it is over it is too late to change his habits. He is bored by idle amusements, and often turns back to his office after trying a year or two of golf and travel. Or, if the quest for money has grown distasteful, he may turn his energy to philanthropy and patronage of good enterprises: to the founding of research institutions, libraries, scholarships, the endowing of orchestras, hospitals, and universities, expecting in return a voice in their policy and management. He may become an art patron, probably buying on the advice of agents, or because the names of the artists are well known, since he himself is ignorant of art values. He may turn to politics and run for office as Senator, or, more likely, become a power behind the throne as contributor to party campaign funds and member of nominating committees.

His son, meanwhile, has been brought up with less energetic habits, in a fashionable preparatory school and college, with an interest in motorcars and dancing, and the assurance of an easy future whether he works or not. So he enters, after college, the office of his father or one of his father's friends, learning how the business is run, and turns without fatigue at the day's end to dinner, theater, and dancing at his suburban home or in the city's amusement district. In time he inherits his father's business and can, if he choose, entrust it to capable subordinates, coming down for an hour or two in the morning to see that all is running well.

### 6. *Women on the Level of Riches*

His wife, too, is very different from his mother. The older woman had, perhaps, little education. She worked beside her

husband through years of housework and saving pennies, and the acquirement of social graces late in life came with difficulty. The younger generation, a little ashamed of its humble origin, tries hard to cover it up by assuming the manner of those long accustomed to wealth. What was said of the increasing leisure and uncertain aims of women on the comfort level is, of course, doubly true here. She is no longer needed to perform or even supervise home tasks, for the management of home and children is delegated to housekeepers, butlers, governesses, and private schools. Her list of fashionable acquaintances is large, and much care must be exercised to invite the right people: the accepted members of good society at home, the visiting nobleman, diplomat, or new artistic celebrity. Here she is aided by a capable secretary, a young woman of good birth and breeding but little money, who keeps track of invitations given and received, of obligations which must be repaid, and of the arrangements for making dinner and bridge parties, week end house parties, presentation of the *débutante* daughter to society, all faultlessly correct and elegant. The secretary, too, will sort out from the scores of begging letters those which might arouse her mistress' sympathy, and attend to the sending of regular checks to an approved list of charities. The wife, if she is active by nature and rather more serious than usual in her ideals, will have like her husband some special hobby, a milk station, day nursery or settlement house among the poor, a foreign mission or a fund for aiding famine sufferers in Armenia. To this she will give not only money but time and thought, and derive from it the happiness which goes with continued work for a worth-while aim. Even the more frivolous woman, as she advances toward middle age, usually turns her interest more and more from amusement to a life work which gives her self-respect. This may be simply the problem of seeing that her children, if she has any, learn to act and think in accordance with the best conventions. Above all, they must marry well, if possible with some one of greater wealth and more respected ancestry than their own. For the daughter, she may aspire to a European title; the son must at any cost be kept from being entrapped by a designing chorus girl.

So the summer and winter seasons follow each other, city house and country house, a few weeks in the autumn for opera and other

city activities, a January trip to Florida, or, in the yacht, to the Riviera, a few spring and summer weeks at the beach or in the mountains. Here a palatial summer home is waiting, perhaps a model farm if the husband was a country boy, perhaps a literal copy of some Italian villa, medieval castle, or French château. In any case, it is within motoring distance of the country club, with

its unceasing round of golf, bridge, dancing, and gossip about the latest intrigue or impending divorce.



The New York City home of one of the wealthy class—with doors and windows boarded up. It will no doubt remain in this condition except during a few weeks in the fall, when its owners come back for an interval between shore or mountains in the north and shore or mountains in the South. It is interesting to note that within a few blocks of this house is one of New York's most crowded sections. (Photo Hine)

### 7. *Riches as an Aim of Economic Progress*

In America at least, the part played by people born to riches in the country's creative thought, its music, painting, literature, and science, is negligibly small. One must look far to find among them an instance of constructive, unselfish statesmanship. Their greatest contribution so far has been endowing and subsidizing the enterprises of others; an interest often sincerely philanthropic, but sometimes, one may suspect, performed at no great sac-

rifice, to increase the social esteem in which they are held. It is often attended, too, especially in the case of university and political party endowments, with a dangerous increase in their power over the country's thought and action. One may question even whether American wealth is often used to develop the art of living, from a merely selfish, Epicurean standpoint—whether it is productive of genuine, lasting pleasure to those who possess it. Here again generalizations are impossible, but the opinion is widespread among observers that instead of the fatigue and anxiety of poorer people the rich often substitute only neurotic excitement and boredom.



It is such observations, made at every period of history, which have led many philosophers to the belief that moderate wealth is better than riches; that the spur of want is, within limits, a valuable aid to the development of character and intelligence; that few people can withstand the degenerative influence of luxury. If these are true beliefs, then perhaps the economist would do wrong to look toward universal freedom from want as an ideal. "Comfort," with all its disadvantages, may be a better standard of living than riches. This unanswerable problem we must try to evade as far as possible. It is at least unquestionable that the millions of poor would be benefited by rising above misery to a point where physical health could begin, and native talents have a chance to show themselves.

It is also unquestionable that some people can and do use riches well, to the growth and enjoyment of themselves and others; and as time goes on, with the means at hand, more people may perhaps discover what constitutes wise expenditure and the art of living. As to possible degenerative effects, society is at least warned of them in advance, and by proper education may do much to prevent them. We shall touch briefly later upon the problem of wise expenditure, as it affects the purchase of life's necessities. For the rest, assuming that the increase of wealth is, in general, a good thing, we shall go on to consider ways and means of increasing it, which at the same time make more beneficial to the worker the tasks by which he earns it.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. How do you account for the fact that relatively few persons receive incomes of \$10,000 and over? What are the principal sources of these incomes?
2. What proportions of fortunes are due to superior ability? What proportion to chance?
3. What are luxuries? Do they vary in the different income groups?
4. Do the members of this group (Riches) usually receive as great satisfactions for their money expenditures as are received by other groups? Illustrate.





BOOK II  
RAISING THE LEVELS OF LIVING

*PART I*

RAISING THE LEVELS OF LIVING THROUGH EFFICIENT  
PRODUCTION



## CHAPTER 6

### THE MEANING OF "PRODUCTION" AND ITS POSSIBLE RESULTS

#### 1. *The Effectiveness of Modern Methods of Production*

Production is the activity that results in goods. Nearly everything that is useful to modern man is the result of this activity. There are, of course, some goods furnished by nature that are useful in their original states. But not many. Air is one. But air—in a schoolroom, for instance—has often to be purified; and it has therefore had *some* effort expended upon it. This is the usual case. Nature furnishes the raw materials of wealth: the minerals, iron, coal, lead, zinc, copper, cement, and petroleum; the land, the air, and the water; wind, waves, sun-energy, electricity; the forests, the wild grasses and plants and animals—all these. And a primitive people makes use of them in primitive ways. So Hiawatha's life was a simple one. His clothes were the tanned hides of deer, bear, and wolf; his food the wild maize and fruits that were to be had for the effort of harvesting and the game that filled the forests; his shelter was also made of skins and the bark of trees; his weapons were simply



Much of modern progress is closely linked to the steel mill. (Courtesy Interstate Iron and Steel Co. From a drawing by Vernon Howe Bailey)



fashioned of forest woods; and his transportation was furnished by the birch-bark canoe. But even he, it will be seen, had to expend some effort to procure these few essentials.

Our life in a sense is quite like his; in a sense it is very different. We depend upon many of the same fundamental materials, though an extended range of them. We spend the larger part of our time in the occupations of producing just as he did—though these occupations are largely carried on in field and factory instead of in tent and forest. The great difference in the two existences lies just in the greater number of things we have come to depend upon—for better or for worse. Our foods are not just game and wild fruits; we ransack the earth to provide a varied diet. We carry our provisions from place to place in huge ships and long railway trains; we store them in chilled or heated buildings. Our shelter is not a tent with a venthole for smoke and with beaten earth for a floor. Our clothing is more than skins and feathers. We do not succumb, with no other struggle than incantation, to the terrible ravages of smallpox and fevers.

It is the tremendously complicated and delicately interrelated system of producing mechanisms that have made these extended ranges of goods possible. It is estimated that the machinery which makes up the ordinary surroundings of the person who lives in average comfort does the work of twenty servants in the Golden Age of Greece. All these machines are also the result of productive activity. We are all of us surrounded by and dependent upon a network of goods that lifts us above the levels of primitive culture and gives us the possibilities of civilization.

Progress in productive efficiency has never been so rapid as in recent years. The census bureau estimates that our total wealth at the end of 1922 had reached the staggering total of \$320,803,-862,000. Such figures are of course meaningless. They gain significance when accompanied by the statement that the real gain of the last decade has been something like twenty per cent. We are apparently in the midst of a period of almost incomprehensibly rapid accumulation of wealth.

The criticism is often made of this rapid advance in material wealth that it is gained at the expense of more worth-while activities—that in our feverish production we neglect the arts of consuming, that in gathering together the materials of life we lose our

abilities for the enjoyment of them. We forget, it is said, that life was not made for work, but for the cultivation of man's highest capabilities. However this may be—and we cannot here enter into a discussion of these final values—we are of the belief that the higher things of life, whatever they may be, are only possible when material comfort is supplied as freely as possible; and it seems to us that genuine progress is registered by the accumulation of wealth. There can, of course, be foolish uses of it—we shall discuss those later—but, on the other hand, there cannot be wise uses unless it exists. And to condemn wealth because it is sometimes used foolishly is analogous to cutting off the nose to spite the face.

There is a very definite reason for believing that we are not requiring greater and greater efforts of men in production, but are, on the contrary, cutting very rapidly into the time and effort required of them in industry. Some of these reasons will become clearer as we progress into our discussion of the technique of industrial processes. We shall see that everywhere machines and natural forces are being harnessed to do the worst kinds of work. We shall see that there has been a continual shortening of the hours of formal work. We shall see that superior processes and contrivances are being devised for the better adjustment of machines, of series of machines, and of whole industrial units to each other. Some of the problems and some of the barriers to this progress will appear, we hope, in all their formidable colors, but not so exaggeratedly as to lead to the belief held by some misanthropic critics of our civilization that we live in an age doomed to the desuetude of Egypt or of Rome because of our failure to master the forces we have let loose upon our race.

It is perhaps pertinent just here as we begin the discussion of production technique to attempt the picturing of this progress. We shall attempt two kinds of portrayal. First we shall show a list of landmarks in the technique of production which we hope will impress the reader's mind with the triumphant intelligence of man, active in the manipulation of the given materials and situations of his life. And second, we shall show by as nearly contemporaneous figures as possible, how rapid is the cumulative process of wealth-making per capita at the present time. We shall also call attention to figures which show the success industry has had in raising the income of the masses of its workers.

LANDMARKS IN THE EVOLUTION OF PRODUCTIVE TECHNIQUE <sup>1</sup>

- 1663 Marquis of Worcester's design for a steam engine.
- 1690 Papin's cylinder and piston model.
- 1698 Savery's practical steam engine for raising water.
- 1705 Newcomen's practical cylinder and piston engine, used for pumping mines in 1711.
- 1740 Huntsman's crucible cast steel.
- 1763-82 Watt's improvements in steam engine.
- 1764 Hargreaves' spinning jenny.
- 1769 Cugnot's steam locomotive for roads.
- 1769-75 Crompton's spinning mule.
- 1779 Blanchard and Magurier's velocipede.
- 1781 Hornblower's compound steam engine.
- 1785 Cartwright's power loom.
- 1790 Nicholson's cylinder printing machine.
- 1790 Saint's sewing-machine design.
- 1791 Street's explosive gas and oil engines-design.
- 1794 Metal lathes introduced.
- 1795 Bramah's hydraulic press.
- 1798 Robert's paper-making machine, set up in 1803 by Foudrinier and Donkin.
- 1799 Volta's electric current.
- 1800 Medhurst's compressed air.
- 1802 Symington's steamboat on Forth and Clyde canal.
- 1802 Murdock's gas-lighting.
- 1804 Trevithick's steam locomotive on rails.
- 1804 Jacquard's loom.
- 1804 Woolf's compound steam engine.
- 1807 Fulton's steamboat on Hudson River.
- 1807 Street gas-lighting in Pall Mall.
- 1808 Heathcoat's lace-making machine.
- 1811 Blast-furnace gases utilized for heating.
- 1812 Common reaping machine.
- 1814 *The Times* printed by Konig's machine.
- 1815 Krupp's cast steel.
- 1816 Ronald's electric telegraph.
- 1818 Iron vessel built on Monkland Canal.
- 1825 Stockton and Darlington railway opened for trains drawn by Stephenson's engine.
- 1826 Bell's reaping machine.
- 1827 Fourneyron's water turbine.
- 1830 Thimmonier's sewing machine.
- 1830-41 Whitworth's determination of true plane surfaces and the principles of exact measurement in the construction of engines and machines.
- 1831 Faraday's dynamo-electric machine.
- 1832 Hunt's sewing machine.
- 1836 Screw propellers by Smith and Ericsson (independently).
- 1838 Nasmyth's steam hammer.

<sup>1</sup> Shadwell, A., *The Engineering Industry and the Crisis of 1922*. John Murray, London.

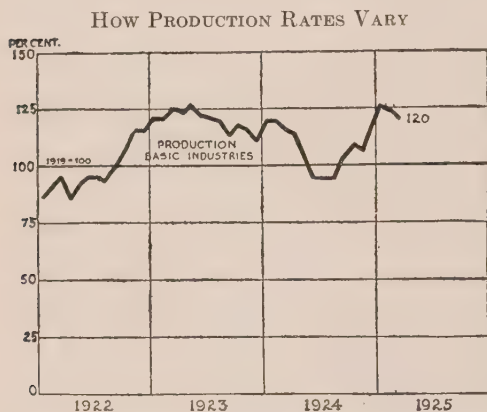
1845	Hoe's revolving printing press.
1846	Armstrong's hydraulic crane.
1846	Howe's sewing machine.
1850	Lister and Holden's wool-combing machine.
1850	Pneumatic drills—American.
1851	Crampton's submarine cable between Dover and Sangatte.
1851	First Great Exhibition.
1856	Bessemer steel process.
1856	Siemens' regenerator furnace.
1857	Siemens' dynamo.
1858	Blake and McKay's boot-sewing machine.
1859	Lenoir's gas engine.
1862	Automobile car driven by Lenoir's engine.
1864	Martin's open-hearth steel.
1864	Fowler's steam plow.
1867	Otto's gas engine.
1868	Mushet's alloy (tungsten) steel.
1870	Hook's gasoline engine.
1870	Gramme's dynamo.
1873	Electric motor action with Gramme's dynamo.
1876	Bell's telephone.
1876	Electric lighting advanced by Swan, Edison, and others.
1878	Thomas' basic steel process.
1879	Hughes' experiments in wireless telegraphy.
1881	Electric tramways.
1883	Daimler's high-speed oil engine.
1883	Parsons' steam turbine.
1886	Cycle and car driven by Daimler's gasoline engine.
1889	De Laval's steam turbine.
1894	Northrop's automatic loom.
1896	Mareconi's wireless telegraphy.
1897	Moissan's electric furnace.
1900	Zeppelin's airship.
1900	White and Taylor's high-speed tools.
1903	Wright Brothers' gasoline-driven airplane.

If this list is impressive in displaying the ingenuity of man, the figures showing some general results of his ingenuity are much more so. First let us say that the estimated increase in population between 1920 and 1923 (the period we wish to use for this purpose) is 3.9 per cent—just under four per cent. Now, if we turn to the Federal Reserve Bulletin issued monthly by the Federal Reserve Bank, of the second district, we shall learn that, using 1919 as a basis and calling it 100, the average monthly production of thirty-four manufactured commodities had, by 1920, increased to 102, but, also, that by 1923, it had increased to 124; this is nearly a one-fourth greater production. Other figures show the same, if somewhat less startling, results. The Federal Reserve Board re-

ports an increase in the monthly average production of twenty-two basic commodities, with a correction for seasonal fluctuations, of from 105 in 1920 to 120 in 1923. This is an increase of 15 points. The Department of Commerce, in its monthly *Survey of Business*, reports a change, using 1919 again as the 100 basis, of from 97 in 1920 to 119 in 1923. This was for 644 basic commodities. Its estimated figure for total production was a change from 99 in 1920 to 113 in 1923.

These figures do not wholly agree; but, taking the lowest estimate as true, there is apparent so great an increase as to be almost

beyond belief. It may, of course, be said that the reason for this is that 1920 was a year of depression (which it was not) and that 1923 was a year of great prosperity (which it was not) and that, therefore, the comparison is generally unrepresentative. This can, however, be tested easily by obtaining some representative figures on employment. And when we do this we discover that employment was actually lower in 1923 than in 1920, the best index—that of Massachusetts—indicating a drop



Index of 22 Basic Commodities Corrected for Seasonal Variation—(1919 = 100 per cent. Latest figure, February.) This chart shows generally that the rate of advance from 1920 to 1923 was not continued into early 1924 but was later re-established. If such periods of slackened effort as are pictured here could be obviated the standard of living would rise enormously in a very few years. (From *Monthly Review of Credit and Business Conditions*, April 1, 1925, Federal Reserve Bank, Second District, N. Y.)

from 114 per cent of that in 1914 to 106 per cent, a decline of eight points.

On the whole, the figures show something like an increase of production *per worker* in our basic industries of fifteen per cent at the lowest. They also show an increase of production *per capita* of the whole population amounting to somewhat more than ten



per cent in three years. At this rate we should double the efficiency of every worker in eighteen or twenty years and should double the goods available per capita in thirty years more or less. But unfortunately we do not maintain this high rate of increase evenly. The whole trend of the production curve is unquestionably upward; but there are movements downward as well as upward. Prognostications as to our economic well-being in the future have to take both into account. The preceding chart shows how these fluctuations occur. It shows also, however, how much above the average for 1919 the production levels have remained since, with the exception of a brief period in 1924, though all these were years of something less than normal productive activity.

On the whole, though there are minor recessions, and though the best rates of advance are never held, we make definite gains in production. How more gains can be made we shall attempt to show in later chapters; but all the suggestions will be found to be advocacies of the greater use of the forces that have caused productive increases in the past such as the more thorough application of scientific discoveries, the establishment of better personal and group adjustments in industry *und so weiter*. It is enough here to grasp the fact that forces are actually at work which are increasing our wealth and adding to our income.

Confirmation of the facts to which we have just been advertising, comes also from another angle. Mr. David Friday inventories the year's capital accumulations for 1924 in our country at some eleven billions of dollars. This means that we have been able to *save* something like one-sixth of our annual income. Concerning this matter he says:

Now as the facts of industrial life for 1924 are becoming available we find that the people were remarkably busy working for themselves all the time they were cheering for the statesmen. They brought forth a sufficient amount of product to maintain themselves in a pretty tolerable state of comfort throughout the year, and to add some \$10,000,000,000 to their durable wealth represented by houses and other buildings, by automobiles and roads, and by permanent improvements to their railroads, public utilities, and manufactures. When they had done this there was still left almost a billion dollars' worth of product which they sent abroad.

There were also interest and principal accruing to them on their investments abroad. The people of this country took in return for their excess exports and their rights to principal and income \$250,000,000 of gold, which they did not greatly need, and \$1,000,000,000 of foreign securities. It appears then that the national savings for the year approximated \$11,000,000,000.

All this has been accomplished, too, while we have been paying almost \$8,000,000,000 in taxes to the federal, state, and local governments for the support of their activities. True, these governments have returned \$1,000,000,000 in round numbers to the people in payment of debts, and another \$1,000,000,000 in payment of interest. But this still left \$6,000,000,000 as the portion of the national income which was used for the prosecution of public purposes rather than the pursuit of private ends.

With such a volume of savings there should be no dearth of capital in the United States; and the experience of the year shows that there is none. We financed the largest volume of building operations which has ever been carried on in any year. We absorbed a volume of new corporate and government securities during 1924 which was unprecedented in our history. New capital issues, excluding refunding, listed by the *Commercial and Financial Chronicle*, totaled \$5,569,689,190. This is a full billion and a quarter larger than the flotations of any previous year. And yet all of this capital was furnished at interest rates which were declining throughout a large part of 1924. It is true that it was accomplished in part by the imports of gold and by the lubrication which this furnished our banking and credit structure; but we paid for the gold with goods which we produced and then exported instead of consuming them ourselves. Our credit structure shows no signs of strain.

Who made the savings of 1924, and what are the specific forms of wealth which represent them? When we list the tangible additions to our wealth they appear as follows:

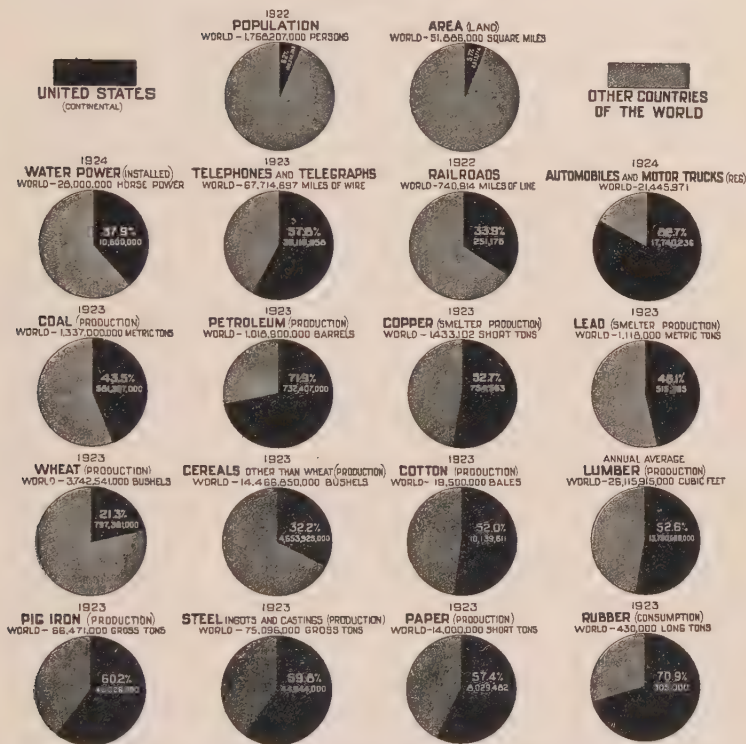
Houses and other buildings . . . . .	\$5,500,000,000
Railroad improvements . . . . .	1,000,000,000
Public utility extensions and improvements . . .	1,600,000,000
Additions to manufacturing plants . . . . .	1,800,000,000
Roads, pavements and public improvements other than buildings . . . . .	1,000,000,000
Automobiles added . . . . .	1,500,000,000
Gold and currency imported . . . . .	300,000,000
Foreign securities imported . . . . .	1,000,000,000

The American people have long been regarded as extravagant lovers and spenders. But as one surveys these figures he cannot escape the conclusion that with all our so-called extravagance we are increasing abundantly our provision for the future.<sup>1</sup>

<sup>1</sup> *The New Republic*, xlii, 66 (March 11, 1925).

# ECONOMIC POSITION UNITED STATES AND THE WORLD

COPYRIGHTED BY  
NATIONAL INDUSTRIAL CONFERENCE BOARD, INC.  
NEW YORK CITY



Unless otherwise noted, the following sources refer to both United States and world figures. Population figures are from United States Statistical Abstract. Area figures are those of the Smithsonian Institute. Power from United States Geological Survey. Telephones and telegraphs from American Telephone and Telegraph Company only (land telegraphs included). Railroads from Bureau of Railway Economics, but from the Archiv für Eisenbahnwesen

for countries other than the United States. Automobiles and motor trucks from United States Department of Commerce. Coal from United States Geological Survey (includes lignite). Petroleum from United States Geological Survey (barrels of 42 gallons). Copper from American Bureau of Metal Statistics. Lead from United States Geological Survey. Wheat (cereals) (other than wheat) and cotton from United States Department of Agriculture. Cereals (other than wheat)

includes corn, oats, barley, rye and rice. Cotton is in terms of bales of 470 lbs. net. Lumber from United States Forest Service (represents saw timber). Pig iron and steel ingots from the Iron Trade Review. Paper from United States Census Bureau for United States from the American Paper and Pulp Association for world. Rubber from the United States Department of Commerce.

(SOURCE: OFFICIAL FIGURES)

N.I.C.B. WALL CHART SERVICE - NO. 103  
FEBRUARY, 1925  
SUPERSEDES CHART NO. 50

This chart compares the United States with the rest of the world in population, area, resources, and commodity production. The responsibilities of economic leadership are difficult to avoid in face of these facts; and the inference of comparative prosperity is obvious. (Courtesy National Industrial Conference Board)

But all indications are that such change as this is cumulative. It comes more and more swiftly. Wealth breeds wealth. Inventions, contrivances, improvements breed inventions, contrivances and improvements. We approach a time of vast increases of per-capita wealth. We shall be dealing, in our next chapters, with the ways and means of hastening this process—and at the same time of humanizing the procedure.

It might be well just here, however, to compare briefly the wealth of our own country with that of some others. This is the best measure of the success of our peculiar productive efforts:

# GROWTH OF WEALTH IN THE COUNTRIES OF THE WORLD <sup>1</sup>

*(Figures in millions of dollars)*

	1922	1912
United States . . . . .	320,803	186,299
United Kingdom . . . . .	88,840	79,297
France . . . . .	67,710	57,075
Germany . . . . .	35,700	77,783
Italy . . . . .	25,986	23,030
Spain . . . . .	29,319	No data
Switzerland . . . . .	4,567	3,030
Russia . . . . .	No data	56,140
Poland . . . . .	17,000	No data
Latvia . . . . .	1,000	No data
Finland . . . . .	3,600	No data
Netherlands . . . . .	8,260	4,827
Canada . . . . .	22,095	10,980
Mexico . . . . .	7,900	No data
Cuba . . . . .	8,000	No data
Argentina . . . . .	13,178	11,680
Brazil . . . . .	13,020	No data
Chile . . . . .	3,064	No data
Peru . . . . .	4,000	No data
India . . . . .	21,960	No data
China . . . . .	19,087	No data
Australia . . . . .	9,689	6,113
New Zealand . . . . .	1,756	No data

Although we have adduced figures from a number of sources, all tending to establish the fact of our increasing wealth, the discerning student will ask whether there is evidence available

<sup>1</sup> These figures are not "deflated," that is, they take no account of the decreased purchasing power of the dollars in which wealth is expressed. The result of the deflating process would, for instance, reduce the apparent increase of 72% in our own wealth to about 20%. The other countries would suffer similar declines, depending on the value of their currencies.

REAL WAGES IN THE UNITED STATES SINCE 1820<sup>1</sup>

Year	Index of money wages <sup>1</sup>	Index of cost of living	Index of real wages <sup>1</sup>	Year	Index of money wages	Index of cost of living	Index of real wages
1820	36	88	41	1873	85	106	80
1821	36	84	43	1874	82	107	77
1822	37	86	43	1875	77	106	73
1823	37	82	45	1876	74	101	73
1824	37	76	49	1877	68	93	73
1825	37	78	47	1878	67	86	78
1826	37	74	50	1879	66	78	85
1827	36	77	47	1880	66	86	77
1828	37	76	49	1881	68	89	76
1829	37	78	47	1882	70	90	78
1830	37	72	51	1883	71	88	81
1831	38	75	51	1884	71	84	85
1832	38	77	49	1885	70	77	91
1833	39	75	52	1886	70	77	91
1834	39	69	57	1887	72	78	92
1835	39	81	48	1888	73	79	92
1836	40	92	43	1889	73	81	90
1837	40	97	41	1890	74	77	96
1838	40	96	42	1891	74	76	97
1839	40	96	42	1892	75	75	100
1840	41	80	51	1893	75	76	99
1841	41	81	51	1894	72	71	101
1842	41	74	55	1895	73	70	104
1843	40	69	58	1896	74	69	107
1844	40	70	57	1897	74	67	110
1845	41	72	57	1898	74	69	107
1846	42	78	54	1899	75	72	104
1847	42	78	54	1900	77	76	101
1848	43	73	59	1901	78	75	104
1849	43	69	62	1902	81	78	104
1850	43	73	59	1903	83	81	102
1851	42	81	52	1904	83	81	102
1852	42	80	53	1905	85	81	105
1853	43	86	50	1906	88	85	104
1854	45	86	52	1907	92	90	102
1855	46	90	51	1908	91	87	105
1856	46	92	50	1909	92	91	101
1857	47	94	50	1910	94	94	100
1858	46	93	49	1911	95	92	103
1859	46	85	54	1912	98	96	102
1860	47	82	57	1913	100	100	100
1861	47	77	61	1914 <sup>2</sup>	102	102	100
1862	48	96	51	1915	104	104	100
1863	55	109	50	1916	118	111	106
1864	64	141	45	1917	134	131	102
1865	72	191	38	1918	168	159	106
1866	76	154	49	1919	193	183	105
1867	78	136	57	1920	232	208	112
1868	79	143	55	1921	207	182	114
1869	83	125	66	1922	201	168	120
1870	84	119	71	1923	220	171	129
1871	86	112	77				
1872	85	109	78				

This table shows an index beginning at 41 in 1820 and rising to 129 in 1920.

This means that real wages (the standard of living of the wage-earners) have trebled during this century. This seems to be a sufficient commentary upon the power of industrialism to better life—admitting, of course, that access to more goods *means* a betterment of life.

<sup>1</sup> From *The American Economic Review*, xv, 32, Mar., 1925. For the method used in joining the various series used the student is referred to Professor Hansen's article.



that these increases have actually resulted in raising the standard of living of the masses of our people. In order to discover this one thing that is needed is a comparison of money wages received by the average worker over a period of years. But this is not sufficient because it will be apparent that a given amount of money buys more at some times than at others, at least that it varies in its power to purchase goods. To supplement a comparison of money wages in the past and now, we ought to have also figures showing the cost of obtaining the goods, ordinarily used by people, for the same periods with evidence concerning the money received and with facts concerning the costs of goods. We can get, by dividing, a representation of what the wages received actually

INDEX NUMBERS OF COMPARATIVE REAL WAGES IN VARIOUS  
CAPITAL CITIES, OCTOBER 1, 1924 <sup>1</sup>

[London = 100]

City	INDEX NUMBERS BASED ON QUANTITIES OF FOOD CONSUMPTION IN—						GENERAL AVERAGE INDEX NUMBERS	
	Belgium and France	Central Euro- pean countries	Great Britain	Southern European countries	Scandi- navian countries	Oversea countries	Based on food only	With allow- ance for rent
Amsterdam....	85	89	79	83	90	83	85	85
Berlin.....	62	68	60	60	64	61	63	65
Brussels.....	53	55	52	52	58	53	54	58
Christiania....	79	81	77	79	87	78	80	82
Lisbon.....	29	28	28	28	31	30	29	..
London.....	100	100	100	100	100	100	100	100
Madrid.....	48	50	43	48	49	47	48	..
Milan.....	49	48	45	51	55	49	50	53
Ottawa.....	157	151	163	158	176	176	164	146
Paris.....	74	74	70	71	83	71	74	75
Philadelphia...	210	205	221	212	245	232	221	220
Prague.....	57	61	54	54	60	56	57	62
Rome.....	49	45	45	50	50	48	48	52
Stockholm....	74	76	78	78	91	83	80	78
Sydney.....	141	131	155	149	138	152	144	..
Vienna.....	45	45	45	47	49	47	46	50

<sup>1</sup> From the *Monthly Review* of the Bureau of Labor Statistics, U.S. Dept. of Labor. The figures for Lisbon, Rome, and Milan are relatively low. This may be accounted for in part by the differences in the items of food consumption in the southern countries from those ordinarily consumed in most of the other countries included in this table. The budgets used in the comparisons do not make adequate allowance for the vegetable consumption in the southern European countries.

meant in the past, and mean now, in goods income. This *goods income*—or *money wages* translated into *what money wages can buy*—is what economists call *real wages*.

Fortunately we have just such figures in the form of a table of indexes prepared by Mr. Alvin H. Hansen in 1925. (See p. 119.)

That the United States is more fortunate than other regions of the earth in this respect is apparent to any observer. But it is not often realized that real wages in the United States are double those in the highest European city—London—as the preceding table shows.

We may congratulate ourselves upon the rapid gains in efficiency

## NATIONAL WEALTH OF THE UNITED STATES

(As Estimated by the Bureau of the Census)

	1922	1912	1904	1900
Total .....	\$320,803,862,000	\$186,299,664,000	\$107,104,194,000	\$88,517,307,000
Form of Wealth.				
Real property and improvements taxed.....	155,908,625,000	96,923,406,000	55,510,228,000	46,324,839,000
Real property and improvements exempt.....	20,505,819,000	12,313,520,000	6,831,245,000	6,212,789,000
Live stock .....	5,807,104,000	6,238,389,000	4,073,792,000	3,306,473,000
Farm implements and machinery.....	2,604,638,000	1,368,225,000	844,990,000	749,776,000
Manufacturing machinery, tools and implements.	15,783,260,000	6,091,451,000	3,297,754,000	2,541,047,000
Railroads and their equipment.....	19,950,800,000	16,148,532,000	11,244,752,000	9,035,732,000
Motor vehicles .....	4,567,407,000	.....	.....	.....
Street railways, shipping, waterworks, etc.....	15,414,447,000	10,265,207,000	4,840,547,000	3,495,228,000
Street railways .....	4,877,636,000	4,596,563,000	2,219,966,000	1,576,197,000
Telegraph systems .....	203,896,000	223,253,000	227,400,000	211,650,000
Telephone systems.....	1,745,774,000	1,081,433,000	585,840,000	400,324,000
Pullman and other cars not owned by railroads.	545,415,000	123,363,000	123,000,000	98,837,000
Pipe lines .....	500,000,000	.....	.....	.....
Shipping and canals.....	2,951,484,000	1,491,117,000	846,490,000	537,849,000
Irrigation enterprises .....	.....	360,865,000	.....	.....
Privately owned water-works .....	360,885,000	290,000,000	275,000,000	267,752,000
Privately owned central electric light and power stations .....	4,229,357,000	2,098,613,000	562,851,000	402,619,000
All other .....	80,261,762,000	36,950,934,000	20,460,886,000	16,851,423,000
Agricultural products .....	5,465,796,000	5,240,020,000	1,899,380,000	1,455,069,000
Manufactured products .....	28,422,848,000	14,693,862,000	7,409,292,000	6,087,151,000
Imported merchandise .....	1,548,666,000	826,632,000	495,544,000	424,971,000
Mining products .....	730,296,000	815,552,000	408,067,000	326,852,000
Clothing, personal adornment, furniture, horse-drawn vehicles and kindred property.....	39,816,001,000	12,758,225,000	8,250,000,000	6,880,000,000
Gold and silver coin and bullion.....	4,278,155,000	2,616,643,000	1,998,603,000	1,677,380,000

that are evidently being made in our basic industries and upon the consequently increasing annual increments of income that are available for the population—for, it must be remembered, not only do the figures show an *absolute* aggregate increase but also a *relative* increase, which is the important point. This is to say that not only do we pile up wealth for the nation but we increase income for the individuals and families that comprise the nation. While there may be cause for self-congratulation here, however, we ought to remember, what any casual observation is sufficient to remind

us of, that we still fall far short of any ideal efficiency. We have only to look about us to see obsolete factories, run-down systems of transport, badly planned warehouses, and—perhaps worst of all—ill and irritable people, made so by the wretched conditions of modern work. These pose a problem for the modern intelligence. It is our task not only to move forward the outposts of discovery in industry but to devise the means of bringing up to our present norms of health and efficiency the great bulk of the men and the equipment of our age. It is no less a test of our advancement that we have still many units that are inefficient than that we have made inventions which should have caused their elimination.

The preceding table shows the different forms of wealth in the United States and their increases since 1900. It shows how greatly our wealth has grown. But it also shows that the relatively greatest advances have been made in the general fields of manufacturing rather than in extraction.

If we attempt to arrive at an estimate of the gain of our national wealth in the last decade covered by the figures, we arrive at a 72

1922	362	
1912	210	
1904	121	
1900	100	

per cent increase though this, deflated, amounts to about twenty per cent. Now if we contrast with this general average of growth and development, manufacturing enterprise on the one hand and agricultural products on the other, we discover that while industrial values have in-

This chart shows the relative increase in total wealth of the United States, using 1900 as the base year. See table on p. 121. The numbers at the left of the bars are index numbers. (Based on statistics of Census Bureau)

creased at a rate far in excess of the average (159 per cent as contrasted with 72 per cent) the value of agricultural products has increased not at all, or very slightly.

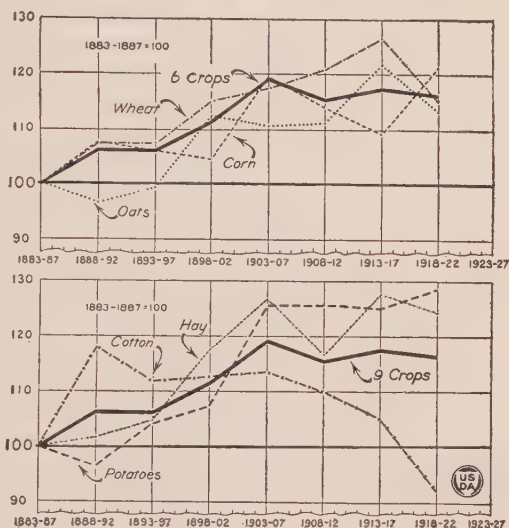
## 2. *The Special Case of Agricultural Production*

We seem here to confront one of the great difficulties of modern progress: the unequal development of the necessary forms of activity. In agriculture, as we clearly see, our productive efforts have been relatively ineffective. And since agriculture is the most basic of all industries which indeed provides us with the raw materials of all those goods that make up the standard of life (ex-

cept those provided by mines, by the sea, and as natural forces) especial pains ought to be taken to insure progress here. The whole problem of agricultural production is very complex. It is notably different too in America from the problem in Europe, as is very frequently said. Until very recently we have had in contrast with Europe relatively more land than workers and so our progress had taken the direction of extending the area of cultivated land. But most of this free land is exhausted now, and in recent years the direction of search for greater efficiency has been changed toward the effort to make each acre produce more than in the past, a search in which older countries have been engaged for a long time. And it is just here that progress has been rather alarmingly arrested.

During the decade in which the Civil

War took place there was a great increase not only in acreage cultivated but in average yield per acre. Then machinery—the improved plow, the mower, the reaper and binder—was doubling and trebling the effectiveness of each worker; and extensions of cultivation were being made to good soils with natural fertility which were

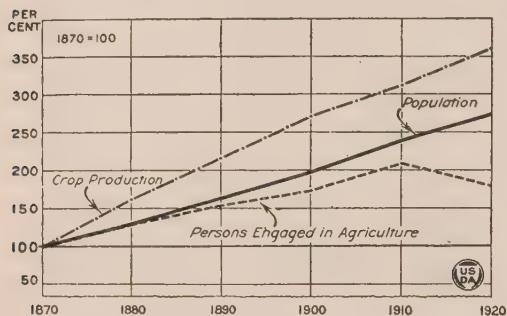


Index of yield per acre of each of six important crops and combined index of nine important crops, by five-year averages, United States, 1883-87 to 1918-22. The five-year average yield per acre was higher in 1918-22 than in 1883-87 for all of the six crops except cotton. However, the average yield for 1918-22 was lower than it was in 1903-1907, not only of cotton but also of wheat, oats, and hay. The composite curve for nine principal crops, shown by the heavy black line, also indicates a slightly smaller average yield in 1918-22 than in 1903-1907; though about 16 per cent above the average yield for 1883-87. The composite curve was made by weighting the yield of each crop by its relative acreage in the period 1908-1912. (U.S. Dept. of Agr. Year Book, 1923)

also free from the ravages of the many pests that later developed. As time went on, however, the full effects of machinery were felt. And newer machines, perfected since, have failed to make any such gains as were made by the earlier ones. Extensions of cultivation also were now into the semiarid regions east of the Rockies where lack of rainfall seriously limited production per acre. And, to make matters complete, by the beginning of the new century,

the pests had come which are the bane of established agriculture everywhere. On the whole production *per acre* has diminished since that time, as the charts on page 123 will show.

This makes a problem that is sufficiently serious to outweigh any overconfidence in the future that might follow from study of the rapidly increasing productivity of the manufacturing industries. It would not be serious if there were available an unlimited amount of land, for then our present agricultural production *per capita* could be kept up by simply bringing in new acres.



Trends of total population, of number of persons engaged in agriculture, and of aggregate volume of production for ten principal crops, United States, 1870-1920. The chart indicates that the ratio of population to crop production has not changed greatly since 1880, but that since 1870 the volume of crop production has increased much more rapidly than the number of persons engaged in agriculture. In fact, in 1920 the index of crop production was more than double the index for persons engaged in agriculture. Some allowance should be made for the fact that the date of the census was changed from April 15 in 1910 to January 1 in 1920, a time of year when the number of persons reported as engaged in agriculture is likely to be a minimum. However, it seems clear that the amount of crops per capita and the amount per man engaged in agriculture were both considerably larger in 1920 than in 1870. (U. S. Dept. of Agr. *Year Book*, 1923)

But land is not available in anything like the necessary quantities. The seriousness of the situation is mitigated somewhat by the fact that we have shown an ability to increase production *per worker engaged in farming* as is shown in the accompanying table, and that, so far, there has been no decrease in production *per*



*capita of the whole population* as, again, the preceding chart on page 124 shows:

PRODUCTION OF PRINCIPAL FARM PRODUCTS PER FARM  
WORKER IN THE UNITED STATES

	1900	1920
Wheat.....	54.9 bushels	78.1 bushels
Corn.....	205.4 bushels	301.0 bushels
Cotton.....	.976 bales	1.247 bales
Rice.....	24.7 pounds	135.5 pounds
Sugar beets.....	16.0 pounds	135.3 pounds
Cattle on farms.....	4.28 head	6.29 head
Horses on farms.....	1.33 head	1.86 head
Sheep on farms.....	4.08 head	3.66 head
Swine on farms.....	3.62 head	5.29 head

Except for sheep, every item shows a considerable increase. This exhibits the chief difference between American and European agriculture. In Europe production *per acre* counts because land is scarce; in America production *per man* counts because men are scarce.

However, the fundamental problem remains acute in spite of our demonstrated ability to raise greater crops per man. We have an increasing population; we desire to advance the levels of living; we are dependent upon the raw materials of agriculture; there is a scarcity of new land; we are not increasing the per acre yields of those now in use. Put this way, the whole critical situation becomes plain. Evidently our ability to better the results obtained from the use of our available raw materials depends mostly upon:

(1) Our ability to increase yields *per acre*.

(2) Our ability to use wisely the produce of the land so that it shall yield the maximum of satisfactions.

It will perhaps be well to explore each of these possibilities briefly to see the likelihood of success in meeting our problem.

Concerning our ability to increase yields per acre, we may at once say that the potentialities seem really endless. New inventions of machinery, new processes of cultivation, new controls of destructive pests, new successes in breeding for resistance to disease and for increased yield—all these are happening. And he would be a bold person who would say that within the next decade fundamental changes, changes that will revolutionize the ancient arts of husbandry, will not occur. They may. But do we need to depend upon them? Some light is thrown upon

the problem by comparison of our own with European experience. What has been done abroad can be done here. It is a matter, as we have said before, of bringing the bulk of our productive units up to the standards of the best. The following figures show how far Europe is ahead of us in these respects:

AVERAGE YIELD PER ACRE OF VARIOUS CROPS IN CERTAIN COUNTRIES, AS COMPARED WITH THE YIELD PER ACRE IN THE UNITED STATES, 1909-1913<sup>1</sup>

CROP	YIELDS PER ACRE						
	Germany	France	Great Britain and Ireland	Belgium	Average weighted by crop acreage	United States	Superiority in yield
	Bu.	Bu.	Bu.	Bu.	Bu.	Bu.	Per Cent.
Wheat.....	31.8	19.6	31.7	37.6	23.5	14.6	61.22
Rye.....	29.0	16.6	30.1	35.2	26.6	15.6	70.40
Barley.....	38.5	25.8	35.3	51.1	34.7	24.0	44.96
Oats.....	54.9	36.2	50.7	66.1	47.4	30.4	55.96
Potatoes.....	203.7	127.4	216.2	277.2	157.2	97.0	62.12
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	
Tobacco.....	1,713.0	1,231.2	936.8	2,034.2	1,481.0	820.8	80.43
	Tons	Tons	Tons	Tons	Tons	Tons	
Sugar beets.....	12.6	10.7	.....	12.3	12.0	10.1	19.28

Agricultural efficiency is superior in Europe because of longer experience with intensive cultivation and because of better controls through the social mechanism. When Germany wishes to raise the starch content of the potato, she sees to it that seed is planted which will accomplish the result. In this case she made a particularly spectacular gain, but there have been many others. Our own Department of Agriculture might do as much for us if it were given a chance.

However, our question is not wholly answered when we have discovered that by adopting European methods of cultivation we may increase our crops. Our conditions may be different. But here the conclusions of the Land Utilization Committee of the Department of Agriculture are reassuring.<sup>2</sup> It is their belief that for our ten principal crops which occupy ninety per cent of our crop area we may expect an average increase of nearly 46.8 per cent. They say, "If this increase in yield of crop land

<sup>1</sup> From *Annuaire international de statistique agricole* (Rome, 1922).

<sup>2</sup> *Yearbook of the Department of Agriculture* for 1923, p. 469.

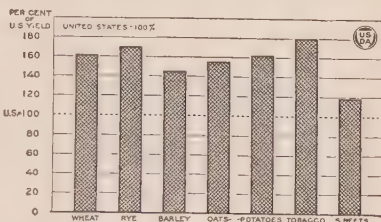
could be achieved by the time our population reaches 150,000,000 (estimated at about three decades), we should require only 269,662,000 acres, about 34,000,000 acres less than we used for domestic consumption in 1920." They say further, however, that "this would be a somewhat roseate outlook if it were probable that . . . it would be made in less than three decades; but when we remember that there has been no increase in average yield per crop acre in the past two decades . . . it seems improbable."

Here is our problem again. We may go ahead if we like; it is a problem of intelligence in the use of nature's gifts.

The other way in which we may make very definite gains is through economies in consuming. Here again we *might* make vast improvements; but we shall be nearer reality in assuming that we shall not make more improvements than have been made elsewhere. For such a purpose we may compare our habits with those of Germany,<sup>1</sup> where the estimated caloric value of daily consumption at the time of this study was about fifteen per cent in excess of normal physical requirements.

"On the basis of this comparison it is estimated that under the German standard of consumption of animal products there would be an economy of about 64,000,000 acres in the amount of crop land that is required under the present American standard of consumption of animal products."<sup>2</sup>

This admittedly would be somewhat offset by the relatively



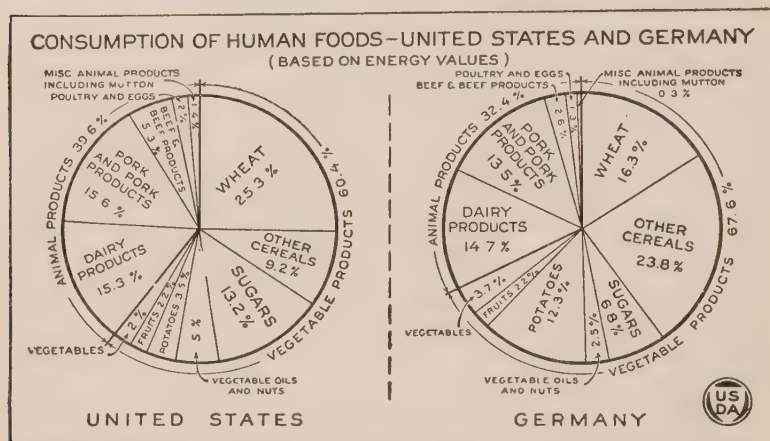
Average yields per acre, 1909-1913, of seven important crops in four European countries expressed in percentage of average yields in the United States. The average yield per acre for the four European countries—United Kingdom, France, Germany, and Belgium—is higher than that for the United States in the case of each of the seven crops. The combined average yield for all seven crops, weighted in each case by the relative importance as shown by acreage, is a little over 41 per cent higher for the European countries than for the United States. (U.S. Dept. of Agr. Year Book, 1923)

<sup>1</sup> *Op. cit.*, p. 481. We are here anticipating somewhat the discussion in Part III of this book.

<sup>2</sup> Cf. below Book III for a statement of other gains to be made by consumption changes.

larger requirements of crops employed directly for human consumption, but the total saving would not be less than 37,000,000 acres.

The table following on page 129 shows the possible ways in which we may meet the problem of providing a sufficient basis



The German diet in the years just preceding the World War was ample in nourishment, but represented certain economies made necessary partly by scarcity of land and partly by a lower per capita income as compared with the United States. The combined consumption of cereals and potatoes for Germany comprised a much larger percentage of the total than in United States, although our consumption of wheat was a larger percentage of the total than in Germany. The percentages of energy units obtained from pork and dairy products are not greatly different for the two countries, but beef and sugar have a considerably larger place in the American than in the German diet. (U.S. Dept. of Agr. *Year Book*, 1923)

of agricultural raw materials for the population of 150,000,000 which we may expect to reach in the next few decades.

Each of the three columns is based "upon extreme assumptions. The first emphasizes the fact that without important changes in methods of production, standards of consumption, or both, we could not provide for a population of 150,000,000. The second and third rest on the assumption that one type of adjustment will be exclusively employed—that is, either increase in production per acre or modification in standards of consumption." However, by the time a population of 150,000,000 is reached, it is perhaps unlikely that we shall do either to the estimated extent; we are

## LAND REQUIREMENTS FOR A POPULATION OF 150,000,000 \*

TYPE OF LAND USE	Assuming no changes in per capita consumption, or in the average yield per acre of crop land, carrying capacity per acre of pasture land, and annual growth per acre of forest land.		Assuming no changes in per capita consumption, but an increase to European standards in yield per acre of crop land, carrying capacity per acre of pasture land and annual growth per acre of forest land.†		Assuming no changes in yield per acre of crops, carrying capacity of pasture, and growth of forests per acre; but a reduction in per capita consumption of food and forest products to the standard prevailing in Germany prior to the World War.	
	Total (thousands of acres)	Acres per capita	Total (thousands of acres)	Acres per capita	Total (thousands of acres)	Acres per capita
Crop land . . . . .	431,000	2.87	270,000	1.80	394,000	2.63
Humid grass land pasture . . . . .	336,000	2.24	121,000	0.81	215,000	1.43
Semiarid pasture (constant) . . . . .	587,000	3.91	587,000	3.91	587,000	3.91
Woodland pasture (constant) . . . . .	237,000	1.58	237,000	1.58	237,000	1.58
Forest ‡ . . . . .	1,465,000	9.77	636,000	4.24	169,000	1.13
Provisional total . . . . .	3,056,000	.....	1,851,000	.....	1,602,000	.....
Less duplication of forest and woodland pasture . . . . .	237,000	.....	237,000	.....	169,000	.....
Net total . . . . .	2,819,000	18.79	1,614,000	10.76	1,433,000	9.55

\* With no allowance for exports and assuming the same proportion of our national consumption of farm products obtained from imports as for the present population.

† For maximum increases in crop yields, the basis of determination was the average yields for four European countries; in humid pasture the carrying capacity of pastures in Germany; for semiarid pasture, the results of certain experiments under public management in this country; and for forests the average annual growth in the forests of Germany.

‡ Area required for growing the timber consumed instead of cutting from a stored supply.  
(U.S. Dept. of Agr. Year Book, 1923)

more likely to make a compromise. This is a field of admittedly unsafe prediction, but these things may happen. And it may happen that the prediction of Mr. Haldane in *Daedalus* will come true:

“As a matter of fact it was not until 1940 that Selkowski invented the purple alga *Porphyrococcus fixator* which was to have so great an effect on the world's history. In the fifty years before this date the world's average wheat yield per hectare had been approximately doubled, partly by the application of various chemical manures, but most of all by the results of systematic crossing work with different races. . . . *Porphyrococcus* is an enormously efficient nitrogen-fixer and will grow in almost any climate. . . . It has about the effect in four days that a crop of vetches would have had in a year. It could not, of course, have been produced in the course of nature, as its immediate ancestors would only grow in artificial media and could not have survived outside a laboratory. Wherever nitrogen was the principal limiting factor



to plant growth it doubled the yield of wheat, and quadrupled the value of grass land for grazing purposes. The enormous fall in food prices and the ruin of purely agricultural states was of course one of the chief causes of the disastrous events of 1943 and 1944." And Mr. Haldane's imagination leads him to a description of how, when a strain of this organism escaped into the sea it multiplied so rapidly that the whole ocean jellied.<sup>1</sup>

The student will apprehend that though it is easy to show the world upon the threshold of numerous victories over nature which would make it possible for greatly increased populations to be supported, it does not necessarily follow that we ought to enter upon a program which looks definitely to any vast increases. It very well may be decided that it is better to use our intelligences to limit populations by various means such as are advocated by eugenists, and to use our increased resources for raising the standards of fewer people. As a matter of fact it seems probable that populations will increase, but at a diminishing rate, so that something of the stability of numbers will be reached in time here that has already been reached for instance in France. The question of the future of population numbers is too complex to be developed at any length here, but it does seem safe, from available evidence, to assume a population of some 150,000,000 in three or four decades and a gradual increase to something like 200,000,000, at which point stability may possibly be reached. Certainty in such prophecies is impossible, and later developments may greatly change future probable rates of increase. But we seem to be justified in attempting to see at least how we could care for a possible 150,000,000 persons soon, within the limits of our country.

The lesson of our experience so far in both industrial and agricultural production is that the possibilities of progress in each are without limit, but that, at present, we are overweighting industrial advance at the expense of agricultural. This latter feature must be said to be a rather unhealthy one. It means that we are failing to provide the sound foundation in raw material strength that is necessary to continued progress; that, instead, we are paying abnormal attention to the proliferation and refinement of the goods which are made from the raw material resources. The

<sup>1</sup> P. 59ff. The student is urged to read this suggestive little imaginative forecast of the results of scientific advance, published by Dutton, 1924.

remedy for this does not lie alone in the strengthening of production technique. What is required is a revisualization of the place of agricultural activities as the prime source of national strength, and a change in emphasis throughout the social order that can only come by changes in consuming habits and in our methods of apportioning income as well as in improving production. Another factor that exists in the background also, is the eugenic one. It has been assumed that population increases will follow a normal curve. But we cannot be sure of that. The voluntary limitation of births may spread very much more rapidly than we can foresee. If it does the elements of the problem will again shift. The careful student of economics can only assume that changes are likely to occur. What they will be he cannot say with any certainty. But, by looking carefully at past experience, he can take warning from what he sees there. When we do this, we see that the major problems are:

- (1) To keep on making advances in production technique.
- (2) To bring up to the standard of the best the bulk of our industry.
- (3) To concentrate upon the agricultural situation as the probable limiting factor of improvement in the immediate future.

### *3. The Possible Results of Production*

This leads us to say finally, in introducing our section on production technique, that there are at least three possible results that may be sought in production, any one of which involves raised levels of living and all of which are, therefore, objects of consideration here. The first and perhaps the most prominent result that is usually sought for in the study of production is to make it more efficient, that is to say, to produce as great a quantity of goods as is possible, of as high a quality as is possible, as cheaply as is possible. This is sometimes called the "efficiency ideal." Apparently we are making progress toward this goal; and it must be clear that this ultimately results in an increase in the level of living, because greater production must mean larger income. Any group which receives a share of this increased income may raise its level of living accordingly. We shall investigate later on, at some length, the reality of the receipt, by these social groups, of the incomes produced by industry.

The second consideration and one scarcely less important than that of efficiency is to make the working life as satisfying and as beneficial as is possible. This consideration has received a great deal more attention in recent years than it did during the early years of the industrial era because it has become increasingly apparent that unless the working life were made more satisfactory to the individuals who had to work, there would continue to be constant unease and even periodical revolts from the difficult conditions of this work.

The idea that work may be an end in itself, enjoyable for its own sake, is one which spreads very rapidly. It was less important as an aim during the period of the rapid development of the industrial system in the nineteenth century than it has since become, perhaps because it was difficult to see how, in the ugly factories and in the midst of whirling machinery and the grime and dust of primitive factories, it was possible to find any joy in industrial activity. Improvements in factory planning and a more complete mechanization of industry have made it more likely, however, that this end may reasonably be sought in industry as well as in other activities of life. After all, an individual's greatest and perhaps his best efforts are spent in the hours of his working life; and the making of that working life more satisfactory to him is as important as the bettering of any of the other conditions of the life he must live. We shall, therefore, have to consider this as a part of our discussion of production both in rural life and in urban and manufacturing activities.

The third consideration which we shall have to keep in mind is that the working life ought rather to be a help than a hindrance to the rational use of the leisure that is made possible by modern shortening of the working day, and to the rational use of the increased wealth of the twentieth century.<sup>1</sup> This can only be accomplished by so managing institutions which are purely productive in their intent that they do not encroach upon the other areas of necessary human activity, for if perhaps the most engrossing activity of life is the work that an individual must do, there are, nevertheless, it must be recognized, many other areas of activity no less important to the development and maintenance of the whole career of an individual in society; and the working

<sup>1</sup> Cf. S. N. Patten, *Product and Climax* (Huebsch, 1909).

life ought to be so managed that it gives the necessary freedom for these other activities.

We shall go on, then, to consider how these various needs, especially that of producing as great a quantity of goods as is possible as cheaply as is possible, and making life as satisfactory and as beneficial as is possible, may be sought in the two great fields of productive activity: agriculture and manufacturing. And, first, we shall try to discover how they may be sought in agriculture and the rural life.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. How do you account for the fact that per capita production in this country increased over ten per cent in *three* years? List some of the more important factors which you think have made possible this increase. Is this a continuing fact?
2. Make a list of the items which you would include under the "wealth of a nation." Explain the expression "Wealth breeds wealth."
3. How do you account for the fact that the United States has so much more wealth than any of the other countries? Enumerate some of the more important factors contributing to this situation.
4. Is there a "balance of industrial forces" that we have failed to maintain?
5. Point out some of the differences between European and American agricultural production.
6. Crop production has increased during the decade 1910 to 1920; yet we note that the number of those engaged in agricultural production has decreased. How do you account for this?
7. What would be some of the difficulties in adopting European methods of cultivation and European habits of consumption?
8. Does it seem possible to remedy the serious situation of agriculture by any methods you can think of?

## Section A: Rural Productive Efficiency

### CHAPTER 7

#### INCREASING FARM PRODUCTION

The problem of increasing agricultural production is different for



GRADING BY OTTO LEBELHOLDE

Breaking sod in the old way. It is a different kind of job to drive a tractor, and it takes a different kind of man to do it. (Courtesy *The Survey*)

different localities, of course, because of factors of climate and location, but, like the problem of increasing the production of factories, there are certain general aspects of the situation that are true for any climate and any location and that are important too from the point of view of the student of our contemporary civilization who is trying to form the opinions that a citizen is obliged to form but who is not interested in too great technological detail. The problem seems to divide itself rather

naturally into three parts: (a) the indispensable conditions for successful production, (b) better management of the farm unit, and (c) better provision for and use of marketing facilities.

#### A. THE CONDITIONS FOR AGRICULTURAL SUCCESS

We may first examine under this heading the conditions for success in agriculture. There are at least five indispensables: (1) fertile land, (2) enough of it, (3) nearness to markets, (4) a beneficent climate, and (5) an advanced state of the agricultural arts.



### 1. *The Need of Fertile Land*

It will at once be clear that if the land is naturally poor or if its fertility has been exhausted by unskillful use, it will not yield crops. And, lacking crops, the farmer has nothing to sell. Much of the soil of the New England states—though by no means all of it—is naturally stony and much of its fertility has been wasted by generations of use without proper refertilization. Much of the sandy soil of the South has been similarly emasculated by persistence in the use of one crop alone—cotton. Much land even in the rich hill country of New York and Ohio has been similarly destroyed by over-cropping and particularly, in the hill country, by methods of cultivation that have allowed the precious top soil to be washed away into the creeks. Where these, or other, causes have operated to impoverish the land a farmer's best efforts cannot yield him much. It is true too, however, that oftentimes a soil that has been exhausted may be restored by proper tillage and refertilization; and the recovery and putting back into use of many abandoned New England farms furnishes proof of this. The use of new crops or new fertilizers may have this effect.

### 2. *The Need of Sufficient Acreage*

It is further true that the farmer must have a sufficient number of acres to employ his time and his talents constantly and to the best advantage. Few illustrations of lack of prosperity on account of the limited size of farm holdings could be found in America. We, in the United States, are scarcely past the years when the government had land to give away in good quarter-section lots (160 acres) to any one who would settle permanently upon them and add their products to the national wealth. And in the countries to the north and south of us there is still this free land to be had. But in Europe, in Belgium, France, or Germany, there is pressure upon the land that has come about through division and redivision of the lands among children who inherited it and who then set up households upon the part of the ancestral lands that came to them, redividing the estate again for their children. Many generations of this have so reduced the holdings that families are able to exist only by the utmost frugality and anything like what American farmers think of as a comfort level is utterly impossible of attainment, at least without radical changes in farming methods.

Perhaps the best illustration in the world of this land shortage is furnished by the conditions to be seen in some of the Chinese river valleys. Here in some places the land is as fertile as any land could be and the farmers have great skill and a deep love of the soil. But their individual plots have been reduced in size until they average only a few acres, and there have come to be in some places three or four people living on an acre. Professor J. R. Smith<sup>1</sup> comments that "at this astonishing rate one square mile could maintain 3072 persons, 256 cows, 256 donkeys, and 512 pigs. It would be impossible to find an American square mile that could feed, under American methods, the animals alone, to say nothing of the people." Where we compare this with conditions prevailing elsewhere in the world its significance becomes more apparent. And we can more easily understand that too great a reduction in the size of the operating unit may reduce whole rural populations below the comfort level.

There is, of course, a correct size for any one type of farm, but the factors which determine its size are complicated by the different kinds of agriculture that are carried on. M. B. Waite<sup>2</sup> tells the story of a Pennsylvania farmer with a 400-acre farm who, after selling off 100 acres, found, by giving a little better attention to the remaining 300 acres, that his sales were in no wise diminished; later, after selling off 200 acres more, and concentrating all his energies on his remaining 100-acre farm, he made it produce as much as did the original 400 acres.

It must not be supposed, however, from this, that it is possible to reduce the size of farms indefinitely and still have an increase in efficiency. W. J. Spillman<sup>3</sup> in speaking of the small farms that predominate in the region of the North Atlantic Coast of the United States said: "Small farms still predominate in that region, but the reasons are at least partly historical, and not wholly economic. In the West, which was settled up after labor-saving machinery had been generally introduced, these small farms are few in number and are gradually disappearing to make place for the more effective large farms. In general, farm management investigations have demonstrated that the smallest effective

<sup>1</sup> J. R. Smith, *The World's Food Resources*, 1919, p. 520.

<sup>2</sup> *Yearbook of the Department of Agriculture*, 1904, pp. 172-73.

<sup>3</sup> *The Annals*, May, 1915, pp. 69-70.

area for a farm is that which will give constant employment at productive labor to the average farm family. It may be any amount larger than this, provided the farmer himself is capable of managing to advantage a larger amount of labor." This quotation indicates clearly that there is a point beyond which we cannot safely go in reducing the size of the agricultural unit.

We must be cautious enough to remember, however, that conditions change. The efficient size for a dairy farm is not at all



The acreage requirements for the successful maintenance of a herd of cattle are greater than for most other products of agriculture. This, however, is a purebred Holstein dairy herd; and the mixed farming prevalent in most of the United States has such a dairy herd as one of its irreducible elements. (Courtesy U.S. Dept. of Agr.)

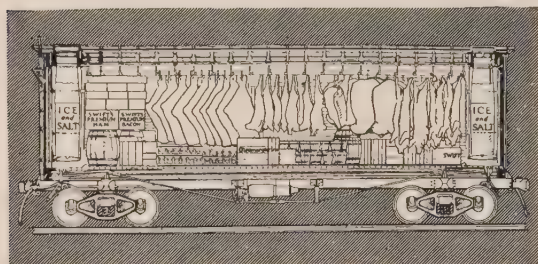
the correct one for a fruit or truck farm. And the corn lands of Indiana have a different efficiency size than the wheat lands of the Dakotas, the cotton lands of Texas, or the potato lands of Maine; and lands change from one use to another. Dairy farms contiguous to the market centers of New York have gradually had to give up the ghost and be transformed into truck gardens; and in this process a subdivision had naturally taken place. One dairy farm will make several farm units for the growing of lettuce, spinach, celery, or cabbages. Conceivably, if cities were reduced in size for any reason, the reverse process might occur. This furnishes, at least, an illustration of the effect of exterior circumstances upon efficiency size in farm units.

### 3. *The Need of Favorable Location*

It must also be quite obvious that the maintenance of a comfort level of living is dependent upon a favorable location; and favor-

ableness in location largely means access to markets. Land in New Jersey near New York City is certain to yield a higher income per acre than equally fertile land in Missouri or Tennessee. This is because on such land the crops can be of the more perishable and higher priced small vegetables or fruits. On equally good land without such excellent marketing facilities either there must be grown less perishable and less valuable crops or there must be paid a higher transportation cost—which reduces the net income of the farmer.

It is, however, true that there are certain factors which tend to reduce the differences in favorableness of location. If it costs



This cross-section drawing of a refrigeration car loaded with fresh and cured meats gives some idea of its usefulness in extending the market for perishable commodities. (Courtesy Swift & Co.)

more to transport celery from Michigan to New York, the farmer has to pay a higher rent (or interest on a more valuable property) in New Jersey. It is also true that the efficiency of transportation increases.

Refrigeration and automotive vehicles have come into use so recently as to furnish excellent illustrations of this. A train can run only on its track and so can furnish transport for but a small fraction of the farms that can be reached by truck over the new improved roads that are being very generally built now by the townships, counties, and even by Federal aid. And before the age of ice-making and refrigerator cars how impossible it would have been for the citrus fruits of southern California to be marketed in Detroit and the peaches from the shore of Lake Ontario to be marketed in St. Louis or Omaha!

So it is that civilizational advances which seem at first to touch not at all—or at most only slightly—the lives of farmer folk, turn out to be of the utmost significance. How many isolated families in the remote valleys of Pennsylvania, for instance, would have believed that their lives were to be revolutionized, no less, by the



experiments being carried on by an obscure mechanic in a little workshop in Detroit. And yet the car that Henry Ford invented has revolutionized the farm life of America, and, indeed, that of much of the rest of the world. There is no reason to suppose that other revolutions cannot occur. In fact there are the best of reasons for anticipating even greater changes in the future. And they cannot fail to make basic shifts in the farm-location factor that now makes some plots so valuable and others, equally fertile, though more remote, nearly worthless.

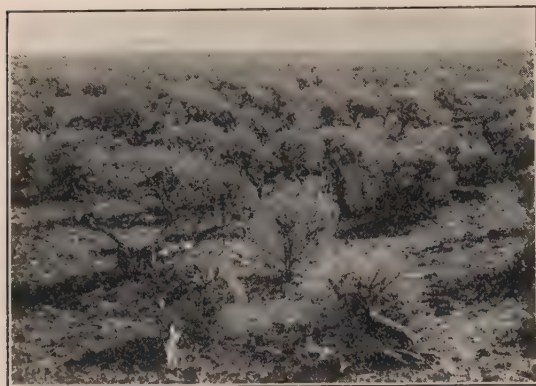
#### *4. The Need of a Favorable Climate*

If ever the human race should learn to control the amount of water that is precipitated upon the land or the hours of sunshine in the week, the greatest gain upon nature ever made by our race would have occurred. For every farmer lives at the mercy of the weather to a degree which cannot be understood by any one who has not lived upon the land. A summer shower upon a field of newly cut hay, a few days of beating sunshine upon a field of seedlings or a night of frost in early September that nips corn, tomatoes or fruit may dissipate the possibility of maintaining a comfort level of life for a year or more. It is no accident that the most frequent topic of talk among farmers is the weather—its vagaries, and prognostications concerning it. Whole folk-lore have been built up around the weather, from the reluctance of the New England farmer to plant his corn until a certain phase of the moon has been reached, to the elaborate propitiatory rites offered to the gods of rain and sunshine by the Indians in the dry lands of the West. They are slightly ridiculous in an enlightened age perhaps; but we can sympathize with the human need that caused them.

One of the important limiting factors of agriculture is the lack of moisture. And it illustrates the limits nature imposes upon human advancement. It is often remarked that America would have been vastly more wealthy without the ranges of the Rockies that shut off the rainy winds from the Pacific and create an arid or semiarid country that reaches to the Mississippi. In all this vast stretch of land there is too little rain for intensive farming. A tiny bit of the lack is supplied by irrigation, but only a tiny bit after all, and the western land remains in large part unused and sparsely inhabited because of a lack of rain.



But if there is too little rain in one place, there is too little sunshine in others—about the great lakes, for instance. And one of the limiting factors upon rural prosperity remains—and must remain until man learns to control climate—the irrelevance of the weather to any designs of man. So long as a week of continuous



Before and after irrigation—two pictures from the Yakima Irrigation Project, Washington. The upper picture shows the land covered with the native sagebrush. The lower picture shows the land after irrigation; fruit trees, shade trees, and crops have driven out the sagebrush. Some of man's efforts to conquer nature have borne picturesque fruit. (Courtesy U.S. Bureau of Reclamation)

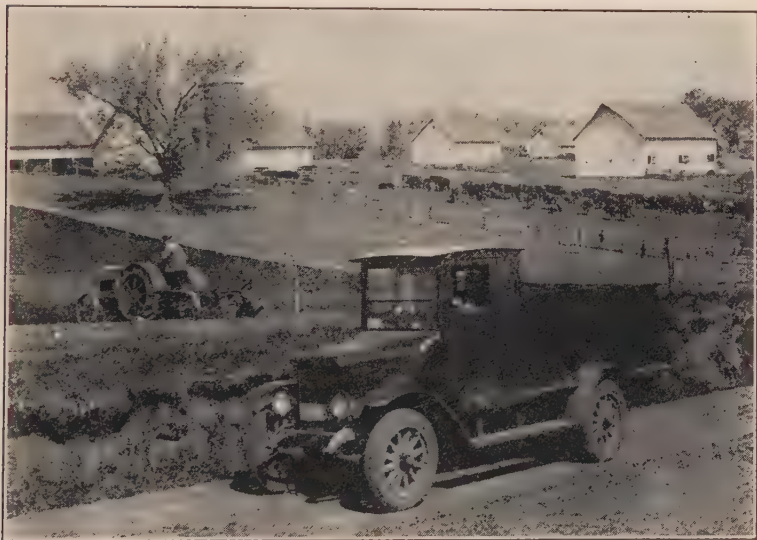
rain upon the full bloom of peach trees can destroy millions of bushels of potential fruit (as happened in the Ontario district in 1922) or so long as a half-inch difference in precipitation can cause the migration of a quarter of a million people in one state in a year or two (as has happened in western Kansas recently) man will live somewhat precariously upon the land unless he fortifies himself with the surpluses of prosperity against the deficits of drought or flood or frost. But he can do this. And some of the chief ways of

insuring a comfort level of life for the rural peoples of America turn upon man's ingenuity in this respect. The use of climatic records, for instance, shows that even natural conditions of storm and pleasant weather are to be discounted by expecting them to occur as they have occurred in the past and not to live in the false

hope that the climate is likely to change for the better. When farmers learn to expect rainy days, rainy days will lose their power over their lives and those of their families. The comfort level in rural life can only be attained by this kind of wise adaptation to nature's irreducible determinants.

### 5. *The Need of Advancement in the Agricultural Arts*

Man's chances of controlling his living standards are not greater in any department of human life, probably, than in the hope he



A scene typical of the prosperous mixed farming sections of the United States, well equipped with machinery and buildings, with a purebred high-grade dairy herd, with well-tilled fields, and served by hard-surfaced roads with automotive equipment. (Courtesy Internatl. Harvester Co.)

legitimately possesses of improving his ways of using the land. The history of the use of the land discloses a continuous record of improvement that may yet have its most spectacular phases. It seems plain enough that the revolution in agriculture which brought in continuous planting in place of allowing land to lie fallow every third year, and that introduced so many new crops (such as the legumes and root crops) had to happen before it was possible to have had the industrial revolution that is so much more often

talked about, for it was the new agriculture that released the people from the land who went to work in the factories of industrialism and provided the food for their support as well as the raw materials for the new manufactures.

Another agricultural revolution occurred in America in the last half of the nineteenth century when agricultural machinery came into use, a revolution not yet ended, and the last phase of which has a number of important aspects, among which are the introduction of the automotive tractor with the consequent improvement in other machinery, the control of diseases and pests, and the scientific breeding of plants for resistance to decimating diseases and for greater yields.

## B. FARM MANAGEMENT

### 1. *Better Uses of the Soil*

Frost, wind, ice, and water are continually at work upon the surface of the earth and the result of their operations is the formation of a layer of finely ground and weathered rock over most of the land of the globe, which we call soil. Very early in biological history life found a pleasant home among the particles there and learned to thrust upward toward the light and air for the other elements that complete the chemical composition of the kind of life we call plants or vegetation.

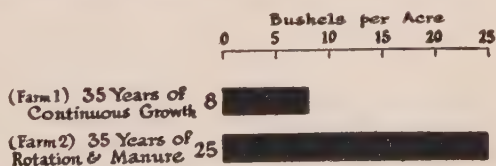
The kind of rock that was weathered and the particular agencies that did the weathering determined that the physical and chemical composition of soils should vary greatly from place to place. Some soils are "light" and some are "heavy." Some are chemically adapted to one plant; some to another. This elemental fact of differences in soils poses the primary problem of agriculture—for in time, human beings came to a stage in their development when they began to manage such natural forces as soils and plant life for their own benefit. And modern agriculture is merely a later stage of that managing. We may sometime—it is quite thinkable—discover some superior way of providing the chemical elements of human existence; but as yet we are fundamentally dependent upon plant life for existence. In that sense we are a secondary form of life, a parasitic species, along with other animals. But that we consider rather a victory of the con-

triving intelligence that resides within us; and we seek continually to extend the campaign and to adopt the life of the plants more cleverly to our needs.

If the first victory was the discovery that plants might be artificially grown and so the casual provision of nature regularized, the second was perhaps the discovery that nourishment was to be had in the direct consumption of plants rather than the comparatively inefficient consumption of animals that have in turn fed on plants. And we have both the new and the old practice of men in our eating habits still, though we seem to move steadily toward the elimination of meat from the diet. The third great discovery came very much later—only a few hundred years ago, in fact. This was that crops might be “rotated.” Until this time it had been generally inferred from the fact that yields on a particular piece of land declined after a number of years of cropping, that the land grew tired and needed rest and restoration. So there grew up the practice of letting fields lie fallow every third year. But now it was discovered that certain plants did not have this exhausting tendency—although we have only just discovered the reason—and that these could be grown in fallow years. The effect was enormous, so great in fact that historians do not hesitate to call it the “agricultural revolution.”

The modern practice of rotation may be said to be the result of this experience. The fact that rotation “worked” in the sense that it assisted in crop growth has been known for some time, though the reasons for this assistance were not known. Not all the chemical mysteries concerned are known at the present time; but we do

know now that not all crops require the same elements from the soil (or, more accurately that they do not require elements in the same proportions) so that a rotation, for instance, of clover, wheat, and corn makes such varied demands that all of them can be met. More importantly than this, however, we



This little chart supplies incontestable evidence of the value of rotation and the application of manures to the farm soil. (Adapted from Farmers' Bulletin 1121, U.S. Dept. of Agr.)



now know that leguminous plants—clovers, beans, peas, vetches, and their near relations—have the curious power of nitrogen fixation; that is to say they can take nitrogen from the air, where it exists in unlimited quantities, and transfer it to nodules which grow upon their rootlets. It is to be found there in precisely the forms that are best suited to the growth needs of plants. It is for this reason that an interval of leguminous plant growth restores to the soil the power to feed corn or wheat better than an interval of lying fallow, of rest. Nitrogen and phosphorus are the usual limiting elements in plant growth and, we see, one of them is wonderfully supplied in this way by nature's chemistry and that too as a by-product of a useful crop.

This is not the only reason for crop rotation. Others are listed by Professor Weir as follows: (1) the elimination of the injury caused by certain insect pests, (2) limitation of the injurious effects of certain diseases, (3) assistance in the accumulation in the soil of organic matter, (4) improvement in tilth, which (5) conserves the fertilizing elements, (6) aids in solving certain liming and fertilizing problems and (7) assists in controlling weeds.<sup>1</sup> We shall not discuss these in detail here; but we may properly point out that although the scientific knowledge of the necessity for a studied rotation practice has grown cumulatively, there are even today many thousands of acres of otherwise productive land lying fallow—"run out," as it is called—because of an ignorance of rotation rules or a failure to follow them. The cotton area of the South is still pretty much a one-crop section; and this is just as true of the wheat lands of the Northwest. There is still much room for improvement in our rotation practice.

It was a short step to the further discoveries of artificial fertilization—the supplying of the lacking chemical elements—and better tillage, the technologies of which form so great a part of the science of farm practice today.

## *2. Improvements in Plant and Stock Breeding*

Man has always been dependent upon plants and animals for food and clothing. In prehistoric time the struggle to meet his

<sup>1</sup> Wilbert Walter Weir, *Productive Soils* (Lippincott, Philadelphia, 1920). Explanation and discussion of each of these points may be found in that book on pp. 264 ff.



needs from the meager sources of supply must have been a bitter one. At first, the amount of food and clothing he had, depended upon his skill as a hunter and his ability to wrest from a niggardly Nature such things as fruits, nuts, and wild grains. The desire to increase and control this supply early led man to cultivate those plants from which he had obtained the seeds and fruits and to domesticate some of the animals which he had had to obtain by the chase. This was a tremendous step forward, a step which greatly reduced the intensity of the struggle to maintain the balance between need and supply. Rising levels of living and the growth of population soon threatened this balance. Again the problem of obtaining increased quantities of food and clothing presented itself. There were, to be sure, many wild plants which might be brought under cultivation and many animals which might be domesticated; but man turned his attention to methods of selection and breeding of plants and animals with which he was more familiar.

Since the beginning of historic times, and probably before, breeders have selected the more desirable individuals for propagating their stock, but not until the close of the nineteenth century was there any definite attempt to formulate a science of breeding. In fact there was no basis for scientific breeding until the work of such botanists as de Vries and Correns and the rediscovery of the work of Gregor Mendel.

People observed for a long time that offspring tended to resemble the parent stock. Yet no two individuals of any type were identically the same. Usually the difference was slight but occasionally an individual appeared which was decidedly



A year-old Aberdeen-Angus steer (the larger one) and a three-and-one-half year-old Piney-woods steer—a graphic representation of the results of biologic science, and with obvious implications for agriculture. (Courtesy U.S. Dept. of Agr.)

different from the other members of the species. It was these two tendencies which formed the basis of scientific breeding: the tendency to resemble parents, or heredity; and the tendency to be different, or variation. The great step, however, was the discovery made by Mendel and later by de Vries and others, that plants and animals possess unit characters, height, color, shape, texture, etc.; and that in hybrids or crosses between two different but closely related species these unit characters appear according to a definite ratio.

With this knowledge the breeder is able to work with a definite aim in view. He may or may not gain his goal, but he no longer has to leave quite so much to chance as formerly. The scientific breeder must determine the product he desires, select parent stock which has the unit characters necessary to contribute toward this desired product and then work with a great deal of patience to accomplish what he has set out to do. The following table shows what has been done in one instance over a period of ten years at the University of Illinois Experiment Station.

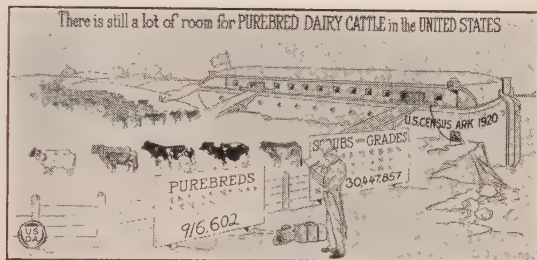
TEN GENERATIONS OF BREEDING CORN FOR INCREASE AND DECREASE OF PROTEIN AND OIL \*

YEAR	HIGH PRO- TEIN %	LOW PRO- TEIN %	DIFFER- ENCE	HIGH OIL %	LOW OIL %	DIFFER- ENCE
1896.....	10.92	10.92		4.70	4.70	
1897.....	11.10	10.55	0.55	4.73	4.06	0.67
1898.....	11.05	10.55	0.50	5.15	3.99	1.16
1899.....	11.46	9.86	1.60	5.64	3.82	1.82
1900.....	12.32	9.34	2.98	6.12	3.57	2.55
1901.....	14.12	10.04	4.08	6.09	3.43	2.66
1902.....	12.34	8.22	4.12	6.41	3.02	3.39
1903.....	13.04	8.62	4.42	6.50	2.97	3.53
1904.....	15.03	9.27	5.76	6.97	2.89	4.08
1905.....	14.72	8.57	6.15	7.29	2.58	4.71
1906.....	14.26	8.64	5.62	7.37	2.66	4.71

\* Univ. of Ill. Exp. Stat. *Bull.* 128. This table exhibits a real accomplishment in biological experimentation. If more protein can be bred into corn, more starch into potatoes, and more milk into cows, one of the certain avenues of progress is permanently opened.

It is not our purpose here to enter into a detailed discussion of heredity and the intricacies of breeding; the student may learn of the fascinating accomplishments in this field in the works of

Morgan, Bateson, Castle, Davenport, and Conklin. There are two important methods followed by breeders at present for improving plants and animals. It cannot be said that one is more important than the other; they are supplemental. The first of these is called grading and is carried out by introducing a pure sire into a herd of common animals. It is a mass method, most easily utilized by the average farmer and requires a relatively small outlay of money. In case a farmer wishes to improve his dairy herd but lacks the funds to go directly into pure-bred milk stock, grading offers him the best alternative. It is necessary that he use pure bred bulls from herds with a definite milk production record. He can then gradually build up his



Similar comparisons could be drawn for other kinds of stock. In industry and agriculture alike one of the greatest needs is to bring the average practice and equipment up to the present standard of the best. (Courtesy U.S. Dept. of Agr.)

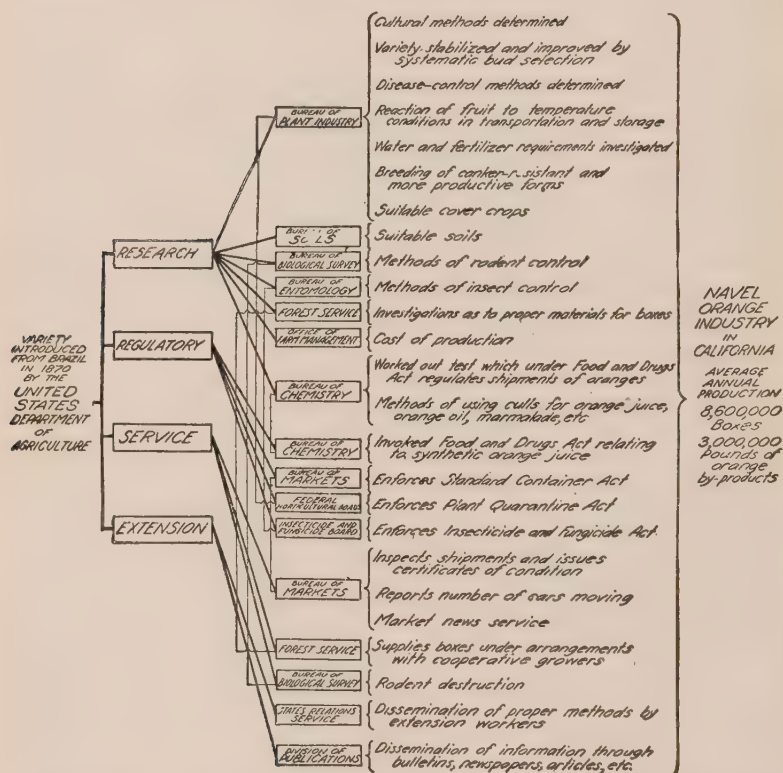
herd from offspring which measure up to certain standards of production by "culling" out the less productive ones. This is the method used by stock growers on the western ranges to improve their herds of cattle and sheep.

The second method, crossbreeding and artificial selection, is a much slower and more expensive method based upon experimentation. Much of this sort of work is now being done by governmental agencies. This method supplies the pure-bred sires to be used in the grading process. It also offers a way of developing types with certain definite desirable traits, such as the absence of beards in barley, long staples in cotton, or greater egg-laying capacity in hens.

The application of the scientific method to stock and plant breeding is an interesting chapter in agriculture; one to which we could devote many pages and mention only a few of the achievements. The things we eat, the clothes we wear, even the flowers which brighten our gardens and homes have been touched in some way

or other by the hand of the biologist. The range of achievement is wide; from hornless cattle to seedless oranges; from American Beauty roses to rust-resisting wheat. Perhaps the most work so far has been done in improving wheat, corn, and live stock,

## DEVELOPMENT OF NAVAL ORANGE INDUSTRY



This illustrates what can be done by coöperation among the various agencies concerned with the improvement of agricultural industry. This particular case illustrates the assistance that may be rendered by Government agencies. (Courtesy U.S. Dept. of Agr.)

varying the oil or starch content of corn, increasing the yield and breeding for greater disease resistance in wheat, and producing animals with far more meat or milk or wool than the original specimens possessed.



There is an important movement over the country now for better stock and better seed. It is being encouraged by breeders' and stock growers' associations through the education of their members, concerning the advantages of better stock and seed as a means of greater unit yields. Stock shows, country fairs, stock-judging contests, demonstration trains, "corn and pig clubs," and short courses in agriculture, are all contributing to this movement. Agricultural colleges, governmental agencies, and farm bureau agents are coöperating in their efforts to aid the farmer in raising the levels of production. Despite the great advances made in the last fifty years we yet have much to achieve. We need better dairy and beef herds; we need to increase the number of disease-resisting types among both plants and animals; we need new varieties of grain which will give us greater unit returns; and there is need for improved varieties of fruits and vegetables better adapted to shipping.

### 3. *Hazards of Production*

Insect pests, rodents, plant and animal diseases, and adverse weather conditions are the greatest enemies of the farmer. Methods of control and curtailment of these enemies combined with ways of bringing greater areas under cultivation offer another approach to the problem of raising the levels of production.

As yet we have developed no methods for controlling climatic

conditions; instead, we have been and are altering our methods of production to meet the hazards imposed by adverse weather and climate. The biologist is breeding and selecting new types which are less susceptible to cold, heat, drouth or excessive moist-



"Smudging" in an orchard to protect blossoms or young fruit from frost. Crude oil is used in this type of orchard heater. (Courtesy U.S. Dept. of Agr.)



ure, as the case may be. Artificial selection has produced varieties of corn that yield abundantly in northern regions, and new varieties of wheat which can now be grown profitably in our southern states. The specialists sent out by the United States Department of Agriculture to search the nooks and corners of the globe for new crop plants and new varieties of the plants that are already common to us are constantly sending specimens which when properly acclimated and adapted to this country, make possible the utilization of uncultivated areas and the replacement of present varieties by hardier and more productive ones.

This adaptation of new plants to the needs of this country is perhaps one of the most interesting and important contributions made by our Department of Agriculture to the agricultural progress of the United States. Alfalfa, introduced from Central Asia about 1854, has now become one of the basic crops in many of our Western States. Rice from Japan, navel oranges from Brazil, durum wheat from Russia, cotton from Egypt, dates and figs from Asia Minor are a few of the many varieties that have been introduced into the United States and developed by the plant-hunters of the Department. Most of these crops have become so firmly fixed in our agricultural scheme that we seldom think of the romance—and often the personal courage—that conditioned their introduction into this country.

While the biologist and the explorer have been providing us with new and more effective crop plants, the practical farmer with the aid of the engineer has developed methods to outwit the extremes of a nature whose averages never represent true conditions. The use of smudges and fires to protect orchards and other crops from damages by frosts is now beyond the experimental stage. Greenhouse culture has reached a high state of efficiency. The winter markets of northern sections receive much of their "out of season" produce from greenhouses. Experiments with the use of artificial light for maturing certain plants, especially flowers, and for increasing egg production, promise interesting results.

Our greatest progress, no doubt, has been made in supplying moisture to the great arid district that lies between the Mississippi and the Rockies. Irrigation is an old art. It was practiced

very early in most parts of the world, especially in Egypt, in China and in India, and by the Indians of an early period in both North and South America. The actual methods of applying the water to the field have probably changed but little from those times to ours. Our progress has been rather in increasing the size of our operations and in the efficiency of our construction



Roosevelt Dam, Salt River Irrigation Project, Arizona. This enormous masonry structure 280 feet high and over 1000 feet long impounds over one and one-half million acre feet of water (an acre foot of water is the amount necessary to cover an acre of ground one foot deep). The difficulties met and overcome in its construction make a fascinating story. (Courtesy U.S. Bureau of Reclamation)

and its maintenance. Our modern irrigating projects with their miles of distributing canals, tunnels cutting through mountains, and enormous dams are worthy monuments of our present civilization.

Supplemental to irrigation, though less extensive, is the practice of "dry farming." This is really nothing more than proper tillage of the soil to conserve as much of the soil moisture as is possible. The top layer of soil is kept loose; this reduces capillarity and prevents the evaporation of the moisture from the surface.

We cannot increase our land area but we can add to our productive area by reclaiming wet lands, by clearing cut-over lands and by



The European corn borer. The upper picture shows the work of the corn borer on stalks of Swiss chard. The middle picture shows the caterpillars of the borer in three stages of growth. The lower picture shows a special crushing machine used for destroying the corn borer by rolling infested plants too green to burn. (Courtesy U.S. Dept. of Agr.)

irrigating arid lands. Much of this has already been accomplished; cut-over lands in Michigan, Minnesota, and other northern states, swamps along the Atlantic coast and dry lands in the West have been made productive. But there are still large areas to be reclaimed; and this will eventually involve the expenditure of vast sums of public capital, an expenditure which at present is being made rather slowly and reluctantly. A growing population may some day force us to measures which now seem unnecessary, measures so extensive even, perhaps, as the storing of the flood waters of the Mississippi River basin and the diverting of them to the great fertile areas of the western plains.

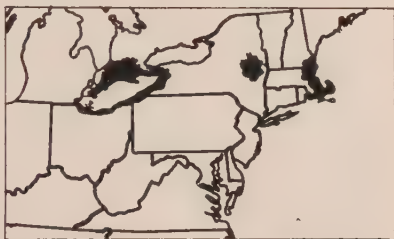
The control of insect and other pests and diseases which affect our plant and animal crops is no less a problem than that of curtailing climatic hazards. It is estimated by governmental experts that about ten per cent of the total crop value in this country is lost through pests and diseases. A list of the more important of these would include grain rusts, blights of various sorts, cattle and sheep ticks, the cotton boll

weevil and cotton boll worm, the foot-and-mouth disease, the white pine blister rust, the corn borer, the gypsy moth, the San José

scale, anthrax, hog cholera, tuberculosis, the Hessian fly, the alfalfa weevil, and numerous others. The boll weevil alone destroys nearly \$200,000,000 worth of growing cotton every year. Rodents destroy approximately \$500,000,000 worth of produce in crops and on the ranges. If we could eliminate or even effect better controls over these destructive agencies we should add materially to the productive efficiency of the country.

A great many of these pests and diseases are not native to this country but have penetrated through shipments of plants, broom corn, grass, in the straw packing of many products, and in imported seeds. The case of the corn borer is an interesting example of this. It made its entrance into this country some time between 1909 and 1914 in broom corn shipped from Italy through the port of Boston. By 1920 the pest had infested an area of approximately 4500 square miles in the northeastern part of the United States and about 3000 square miles in Canada. Only the active coöperation of the federal authorities and the authorities of the states affected has prevented a far greater area from becoming infested. Many of our worst pests have been introduced in some such way. Once acclimated here they invariably spread more rapidly than in their places of origin, largely because their natural enemies are not present.

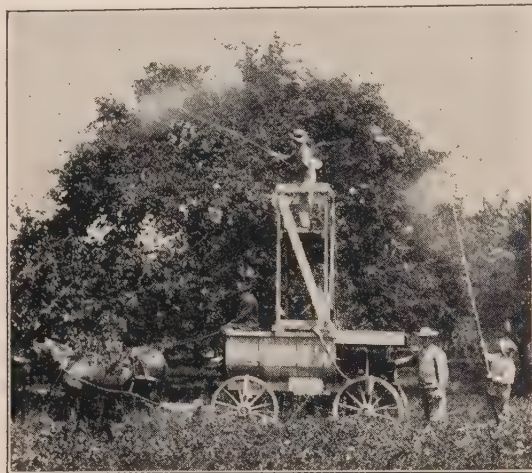
This brings us to the question of control and eradication. The boll worm, the corn borer, and the Hessian fly, when suddenly thrown into a new environment, practically free from their natural enemies, increase at a tremendous rate. The San José scale almost wiped out the citrus fruit industry of California and was not conquered until the Australian ladybird (*Vedalia cardinalis*), a small red beetle, was shipped in and increased to an extent sufficient to combat the scale. Life in the insect world is organized on a basis of checks and balances. So the control of the corn borer, for instance, was felt to depend upon discovering its



The black portions of this map show the approximate area infested by the corn borer during the time between its entrance and 1920. (Adapted from U.S. Dept. of Agr. *Year Book*, 1921)



enemies. Search finally revealed it in the shape of a minute parasite which was discovered in southern France. It has been introduced into the infested section of this country with great success. The methods of control and eradication vary with the pest or disease. The following suggest the more important



A power spray outfit. Spraying with poisonous mixtures offers one of the most effective methods for combating many of the orchard's enemies. (Courtesy U.S. Dept. of Agr.)

and more generally used methods:

(1) Spraying and dusting (fruit trees, garden vegetables, etc.).

(2) Burning (tomato vines for mosaic, cotton stalks for weevils, etc.).

(3) Introduction of natural enemies (parasitic enemies of the corn borer, etc.).

(4) Fumigation (seeds).

(5) Dipping (cattle and sheep for ticks).

(6) Vaccination and inoculation (live stock).

(7) Quarantine of infested areas (stock or plant epidemics).

(8) Tillage (special methods of tillage for plant protection).

There is need for more extensive research in methods of control and eradication, and for a greater corps of inspectors at the ports of entry to watch for dangerous pests and diseases. The funds which the Department of Agriculture has at its disposal for experimentation and investigation are decidedly inadequate. No better investment can be made to insure the future of our agriculture.<sup>1</sup>

<sup>1</sup> The work done under the direction of the Biological Survey in the eradication of rodents and predatory animals is one example of the results which can be obtained by earnest coöperative efforts. Eradication campaigns were started by the Biological Survey of the Department of Agriculture in 1917. By 1920 the area treated had reached 18,000,000 acres of farm and range land.



The hazards of production always will be with us. Whether we shall be able to effect sufficient control to materially raise the levels of production will depend upon our willingness to meet these many problems intelligently and to combat the enemy coöperatively.

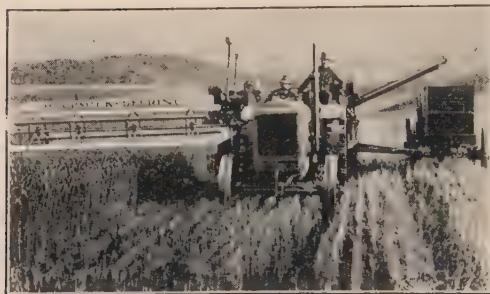
#### *4. Power and Machinery on the Farm*

Some one has characterized the period since the Civil War in this country as the age of machine agriculture. Whether we agree to this or not, we must acknowledge the contribution which labor-saving machinery and power have made toward raising the levels of production in agriculture. In particular, the period from 1825 to 1850 marked the onset of the great transformation in agricultural methods, especially in ways of harvesting. Heretofore all the work of the farm had been done by hand except plowing and hauling. Grain was sown by hand, reaped with a cradle, and threshed with a flail. Hay was mown with a scythe and corn was planted and cultivated with a hoe.

In 1831 William Manning of New Jersey patented the first mowing machine. Within the next three years Obed Hussey and Cyrus H. McCormick had patented reaping machines. Cast-iron plows had been in general use since 1825. By 1840 machines had practically replaced hand methods for threshing. After these machines had become common they so affected the whole agricultural process in this country as to create what may, without exaggeration, be called a revolution.

A few comparisons with earlier methods will show the advantages of the new methods over the old. For example, in a ten-hour day it is possible for a man using three horses and a fourteen-inch bottom walking plow to turn over two and three-tenths acres. In the same-length day, one man operating a 25-30 H. P. engine drawing eight fourteen-inch plows can turn over an average of sixteen acres. In comparing work done in harvesting, the disparity between man labor and machine labor is wider. With the old-fashioned cradle one man can cut two acres of wheat in a day. With an eight-foot cutting and binding machine and four horses

Over 137,000 farmers and stock men coöperated in the work; 1610 tons of poisoned grain, which required the use of four tons of strychnine in its preparation, were distributed.



Evolution of the reaper. Lower—Cutting grain with a cradle. By this method, one man can cut about two acres of grain in a ten-hour day. The gathering and binding still remain to be done. Middle—one of the early types of reapers. Invented by Cyrus McCormick in 1831. Upper—A combined harvester-thresher drawn by either horses or tractor. Capable of cutting and threshing the grain from about forty acres in a ten-hour day. Adaptable to use on small farms. (Courtesy Internatl. Harvester Co.)

one man can cut an average of eighteen acres per day, and, of course, the labor of swinging the cradle far exceeds that of operating a binder. It is not uncommon for a tractor pulling gang plows, harrows, and seeders to prepare and seed from eighty to one hundred acres in a day. We might cite many more comparisons, but they would all point to the same conclusion: that increased production in the United States has been very largely dependent upon the introduction of power and labor-saving tools.

A list of these major tools, considered essential for the successful planting and harvesting operations on an average-sized farm of the Middle West, might perhaps give us a good picture of the part played by machinery in agriculture. The modern farmer follows a standard rotation practice, involving the produc-

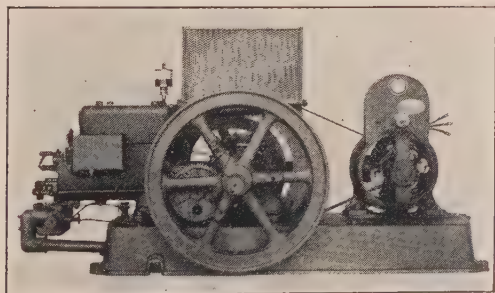
tion of corn, oats or wheat, clover and timothy, and a root crop, such as beets or mangels. He must be machine-equipped for handling the production processes involved in growing all of them. A list might run as follows:

Tractor or teams; plows for team or tractor; harrow: disk, spring tooth, or spike; grain seeder; corn, beet, cabbage, or celery planter; cultivators; mower; hayrake; hay loader; harvesters; grain binder or header; corn binder; wagons; fork and derrick for handling timothy and clover; manure spreader; spraying or dusting outfit for fruits and vegetables; hand tools—hoes, shovels, rakes, forks, etc.

These are but the major tools, and if our list were to be made complete it would have to include many other items, for special uses on specialized farms. A few hours spent in an inspection of



In many cases the tractor has replaced horses as a source of power for plowing. (Courtesy Internatl. Harvester Co.)



Small electric-light outfits like this are of great value to the farmer who lives beyond the reach of a power line. They are driven by an internal combustion engine and equipped with a storage battery. (Courtesy Fairbanks, Morse & Co.)

farm machinery at one of the large agricultural fairs will yield the student a better notion of the part now played by power and machinery in the agricultural process.

The sources of power on the farm are as varied as in industry. But the application of power to the farming process has been much more recent and

much less extensive than in industry, and so animal power remains, as it always was, the main source of power for the farmers. But with the invention of the steam engine, the

internal combustion engine, and finally the application of electricity, there has been a slow realization by the farmer that the application of these power sources to his problems may not only save much drudgery but may also greatly raise the efficiency of production. Many of the labor-saving devices above mentioned involve the application of some motive power. The horse and mule have predominantly furnished this.

Besides the need for this motive power, there are such operations as pumping water, sawing wood, threshing, ensilage cutting, grinding grain, operating milking machines and cream separators,

and many other small tasks which can be done by power other than that furnished by man or animal.

Wind motors of various sorts have been utilized for a long time to perform many of these operations. It is remarkable, therefore, that there has never been any marked change in the mechanisms for utilizing the wind as a source of power. The changes have consisted of im-



A machine transplanter sets out tobacco plants much faster and better than can be done by hand. The uneven mechanization of American farms is well illustrated here. The field is one that is well suited to tractor operation. But the power in use is obviously man and mule power. Yet there is a machine planter. (Courtesy U.S. Dept. of Agr.)

provements, such, for instance, as the utilization of steel and galvanized iron for making the fins and the supporting structure of the familiar windmill. There have, however, been some interesting experiments in using windmills to drive dynamos. The current thus produced has been utilized in portable motors about the farm and for lighting purposes. Storage batteries have also been utilized for storing excess current to be used when there is no wind.

Water motors have been used to a very small extent as a means of supplying power on the farm, primarily because few farms were located where there was available water power. However, some



communities have developed joint schemes for the production of electric current by the use of water power, supplying the farms in the vicinity of this plant with the current for lighting and other motors. Many tasks which at one time seemed impossible to perform by machinery and power have finally yielded to man's inventive ability. Tobacco and cabbage plants can now be set out by machinery. Potatoes and corn can be planted faster and more evenly by the machine method than by hand. Even the intricate operation of milking cows can be done by machines. Practically every phase of the agricultural process has been affected by the use of power and labor-saving machinery, from the preparation of the ground to the harvesting and storing of the matured crop.

There is a slow movement towards a wider use of tractors in place of horses as the motive power for the many labor-saving implements now in common use. This has been accelerated since the design of the tractor has been changed and better adapted to the needs of medium-sized farms. These medium-sized farms predominate in this country. Therefore, it is essential that if the tractor is to be universally adopted, it be so constructed as to be practicable in small fields. The earlier gasoline and steam tractors were efficient only in operating on the vast-stretching fields of the Dakotas and of Kansas and Nebraska. Even with the improved tractor now coming into the market, there is still much to be done in the development of a machine which will fill the place in the field that the Ford does on the road.

Tractors have not, on the whole, replaced horses as rapidly as they were expected to do a few years ago. There are in the United States at the present time about 25,000,000 horses and mules available for power purposes. This represents available animal power to the amount of about 16,000,000 H. P. The power available in mechanical farm motors probably somewhat exceeds 10,000,000 H. P. This low figure, however, includes stationary engines as well as tractors. The number of tractors in use at present is about 450,000, which means that only seven per cent of the country's farms are equipped with them. There are many points in which the value of the tractor is unique as compared with the horse for motive power purposes. Naturally, the tractor can be pushed for much longer hours during the busy seasons of the year than can horses. A ten-hour day is about as



much as horses can stand, but with the use of headlights it is possible to use the tractors twenty-four hours a day, except for time taken out for repairs. The horse must be rested many times during the course of such a day, and at the end of it goes to the stable exhausted. The best plowing is done when the moisture content of the soil is at a certain stage. This rushes the work of spring fitting. With a farm of 160 acres or more a heavy strain consequently falls upon the horse power of the farm. It is also imperative that crops should be planted during the good weather,



The tractor as an aid to spring fitting. Such wide fields as this permit the tractor to develop its greatest efficiency. On many such farms, tractor or headlights may be seen far into the night during the spring-fitting rush. (Courtesy Internatl. Harvester Co.)

and the same is true of harvesting. It is in such circumstances that the tractor finds its greatest usefulness.

In general, we may say that power has done away with much of the drudgery of the farm. New and improved tools combined with the application of power have made possible the cultivation of greater areas, thereby increasing the volume of production. They

have brought about a decreased unit cost of production and have helped to reduce waste and injury to the crop.

The improvement in the type of farm buildings has also done much toward the indirect raising of the levels of production. Better buildings have made for the protection of stock, machinery, and crops against the ravages of weather and pests. Good buildings properly arranged also contribute greatly towards efficiency and convenience in farm operation. As an illustration of this point, a consideration of a modern dairy barn is of interest. Concrete walls and cork brick floors, steel stanchions, piped water running into individual troughs for each cow, overhead carriers for food, bedding, and manure, electric lights and electric milkers, are the accepted thing on any up-to-date dairy farm. It takes

little imagination to realize what this has meant to the man who formerly had to perform so many tasks by hand without the aid of modern equipment. The storage of crops in properly built places such as silos, granaries, and hay barns, has contributed its share towards increasing efficiency.

As a building material for the farm, concrete is coming more and more into a rightful prominence. It is fireproof, it can be made waterproof and is unique in that it can be run into various forms and shapes without much effort. Part of the material to be used



A modern dairy barn equipped with the latest devices for saving labor and for producing clean milk. This herd would produce certified milk. Not many dairy barns have been brought up to this standard as yet. (Courtesy U.S. Dept. of Agr.)

may be obtained near by or on the farmer's own land. Hardly any farm but has its rocky fields where the pile of rocks now fills some fence corner, and these are ideal material for concrete filing. With reasonable care and effort any farmer, with the help of ordinary labor, can do most of his own construction work. Concrete, for instance, is an admirable material for the building of silos, side walls, floors, troughs, bins, well linings, machine bases, etc.

As has already been said, the farmer has in the past been dependent upon animals and in some cases wind or water for the power to saw wood and pump water. The development of the gasoline engine and the extension of electric transmission lines through the agricultural districts has furnished power which may be used efficiently for performing these countless operations on the farm. Electricity is an especially adaptable source of power

for farm use. It furnishes a safe, convenient source of energy for accomplishing many duties about the farm, such as turning the cream separator, grindstone, feed mills, and fanning mills. The gasoline engine is much more efficient in the smaller units than is the steam engine. It furnishes a low-cost power almost as conveniently as the electric motor and is especially valuable where electric current is not available.

There are still too many farms which are not making the most use of power and labor-saving machinery. Part of this is due to



The electric motor has made easier many of the most irritating minor jobs incident to rural life. (Courtesy General Electric Co.)

lack of education and inertia; another part to financial inability to obtain these advantages. It is to be hoped that eventually electric transmission lines may be pushed into all the agricultural regions of the country, supplying a cheap and efficient power, thereby relieving the farmer of most of the drudgery which has heretofore taken his time, time which he could much better have spent in planning better management or in recreation. There is yet much to be done in improving and adapting existing types of implements and engines to farm needs. There are still many operations about the farm now being done by hand which would yield to power and the machine.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Does favorable location have the same influence upon rural production as upon urban production? Explain.
2. What has been the influence of power and labor-saving machinery upon

agricultural production? Illustrate by specific examples. Suggest other uses of power on the farm than those mentioned in the text.

3. How has man's increasing ability to control the hazards of production—drought, insect pests, etc.—tended to raise the levels of production?

4. Explain the relationships between soil fertility and agricultural profits. Suggest some of the methods now in use to maintain soil fertility. Why have the farmers interested themselves in the disposition of Muscle Shoals?

5. What part has biological science in the problem of increasing agricultural production?

## CHAPTER 8

### INCREASING FARM PRODUCTION (CONT'D)

#### 1. *The Need for Better Management*

Before the advent of power and labor-saving machinery, the life of the farmer was relatively simple. His farm was a world unto itself. He and his family consumed most of the fruits of their labor. His main problem was to produce enough to maintain himself and his family and to have some surplus to exchange for the so-called luxuries of the time, such as coffee and sugar. Then came the industrial revolution. Villages grew into cities and new villages sprang up in the country districts. The demand for agricultural products increased and absorbed the small surplus which the farmer was able to produce. The available tillable areas of Europe were being drawn upon heavily when the great fertile areas of the new world came into bearing. Slowly the methods of the industrial revolution were applied to agriculture and there occurred a change no less significant than in the realm of commerce and industry. This was especially true in America after the Civil War period when agricultural production increased at a tremendous rate, a result, in part, of the advent of power and labor-saving machinery stimulated by a growing market. Of course this increased production was partly also the normal result of the richness and the vastness of our new agricultural areas. During this time little thought had to be given to rotation of crops or maintenance of soil fertility. Those crops were raised which promised quickest returns. This paid temporarily but not in the long run; and our early system of careless soil "mining" can be seen now to have worn out much land in our southern and eastern states. But this result did not at first appear and, so long as there were new areas of fertile country which expanding transportation systems could tap, the nation had little need to think of better farm management. The time has now come, however, when the frontier has been pushed to its westernmost limit. No new areas



like Iowa, Illinois, Kansas, and Nebraska await the touch of the plow to add their product to the stream which is constantly flowing into our urban centers.

## 2. *Efficiency Engineering*

The farmer must now take stock of the factors which enter into his production problems and see if he cannot, perhaps, with a better combination of these factors, get a greater net output. The very nature of agriculture makes it impossible to apply outright the processes of efficiency which have so characterized the progress of our industrial enterprises in this country; yet there is much that can, after due modification, be taken over from the world of business and industry. In general, there is need for a great many

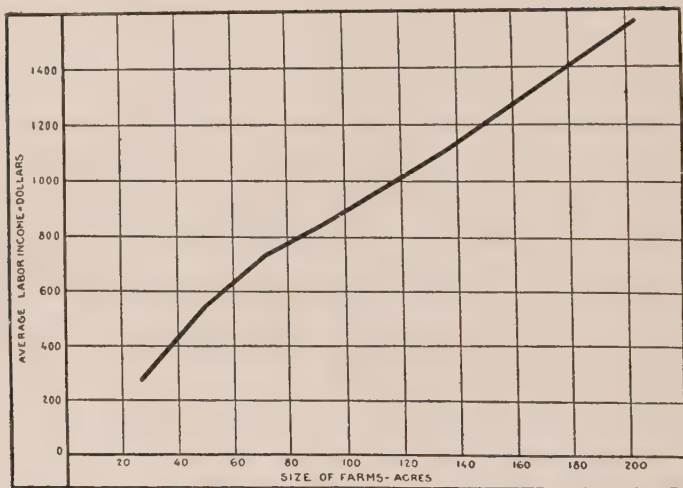


The size of the farm and the nature of the soil are the factors which determine the machine investment that will pay best. (Courtesy Internatl. Harvester Co.)

studies and surveys of farm organizations in typical areas over the country. Out of this should come standardization of farms on the basis of the most economical type and size of farm unit and the amount of capital and equipment of stock and machinery needed to operate the farm to the best advantage. Standards of cost as well as standards of accomplishment for labor and farm machinery should be worked out. Such standards as these should become important criteria against which the individual farmer can check up his own accomplishment.

Many such surveys already have been made by the United States Department of Agriculture and various state experiment stations; and the United States Geological Survey has completed soil surveys of large farming areas. Experts in crop culture are endeavoring to determine just which crops are best fitted for these different types of soil, and which rotation systems will give the

greatest returns. The misdirected energy of trying to fit improper crops to certain soils is a great national waste which has received comparatively little attention. The choice of the crops raised should depend to some extent upon the distance of the market, and its demands. For example, it would in all probability be unprofitable for a farmer to raise hay in some of the mountain valleys on the western slopes of the Rockies and expect to market that hay profitably on the Omaha market. Other conditions permitting, grain would furnish a more concentrated prod-



This chart shows that labor incomes from 378 owner farms of the general dairying type usually found in the eastern United States are greater as the size of the farms increases—at least up to 200 acres. A farmer is under a handicap on this type of farm if he tries to operate with too small a unit. "Labor income" is the net income of the farm less five per cent interest on the capital invested. (From "Farm Management Practice of Chester County, Pa.," U.S. Dept. of Agr. Bulletin 341)

uct for shipping. If it seemed necessary to raise hay as a rotation crop, it could better be sent to market in the form of meat—that is as cattle or sheep.

The farmer as a business man is met with a problem of balancing the instruments of production to be employed. Will he operate a large or a small farm; will he use more hand labor or more machinery and horses? These are some obvious questions to settle. He should, among other things, be governed by what is

the most economical size of farm in the particular section in which he happens to be farming, the price of land, the labor market, and the market for the product. As a business man, the farmer's test of success will be the net profit resulting from this balance. It is here that the need for some sort of system of cost accounting becomes apparent. The system must be workable, yet not so complicated but that it can be run by the farmer or some member of his family in spare time. Attempting to keep a set of books after a day's work in the field is much different than giving one's whole time to it, as does the accountant in a business establishment. However, several such systems have been worked out for the supplying of the farmer with just the type of accounting system needed to furnish him with the essential data of his business. Besides the cost account, there should be records of various sorts, such as records of egg production, milk yields, and quantities and kinds of seeds used; in general such records as these would show the financial standing and the nature of the business. With these, the farmer is in an improved position for checking up the profitableness of his operations. Such records help to locate the leaks which are cutting down his profits. After having located the leaks, the farmer may cast about more intelligently for remedies—such as a study of his farm layout or some application of a modified efficiency system.

The farm layout may perhaps be the source of much inefficiency. The farm, naturally, does not yield itself to planning as does a large plant which is more or less built to order. Much can be done, however, to remedy certain of the topographic and physical features of the farm, such as leveling, grading, and draining; but the farmer often finds that there are certain practical limits beyond which increased efficiency would cost too much. If the enterprise is a new one, great care should be given to the location of the farm buildings from the standpoint of the efficiency of administration, the economy of time in reaching all parts of the farm, and finally, the esthetic and health requirements of the family. Even though the farm buildings have already been located, many changes can be effected with a reasonable amount of cost. Carefully worked out plans may easily be prepared to govern all new building at least. Fields can be laid out in such sizes and shapes as will best lend themselves to economical work-

ing. A rotation practice can be developed which will conform to the natural layout of the ground as well as to the market to be supplied. Whether the need be for reorganization of an old farm or the laying out of a new one, the farmer usually finds it best to get the aid of a specialist, especially if he plans a very far-reaching change. However, there is much that he can do from year to year which may make for greater efficiency and thus greater production.

The following score card worked out by the Department of Agriculture<sup>1</sup> for use in selecting the farm is quite suggestive as to the many details which the farmer as a manager must consider if he would make his enterprise a successful one.

#### BLANK FORM FOR USE IN SELECTING A FARM

Location of farm.....  
 Owner.....  
 Address.....  
 Distance to shipping station.....; to trading center.....  
 Condition of roads.....; in winter.....; in spring.....  
 Distance to schools and churches.....; to nearest neighbor.....  
 Is telephone available?.....; R. F. D.?.....  
 Electric current for lighting.....; for power.....  
 Total area of farm.....; acres in crops.....; acres that can  
     be used for crops.....; acres in pasture.....; acres in woods  
     .....; acres in waste land.....; in roads, buildings, lots, swamps,  
     lakes, etc.....; acres in stump or brush land.....; kind of timber  
     .....; ease in getting out timber or wood.....  
 Topography as regards economy of cultivation.....; irrigation.....  
     danger from erosion or sliding.....; flooding.....  
 Natural fertility as evidenced by kind of forest growth and native vegetation  
     .....  
 Present condition of fertility as evidenced by growth of crops or weeds....  
     .....  
 Physical condition of the soil.....; adaptability to legumes.....  
     .....adaptability to all kinds of crops.....  
 Natural drainage.....; artificial drainage.....; depth of soil  
     .....  
 Kind of surface soil.....; kind of subsoil.....  
 Water supply: Source.....; quantity in dry summer months or during  
     winter months.....; cost of upkeep.....; supply in pastures....  
     .....  
 Buildings as suited to kind of farming.....; adaptability to another type  
     of farming.....; cost of upkeep.....; arrangement for  
     economy of work.....; desirability of dwelling as a home.....;

<sup>1</sup> *Selecting a Farm*, by E. H. Thompson, Farmers' Bulletin 1088, United States Department of Agriculture.



conditions of fences.....; kind as regards cost of upkeep.....;	
farm highways.....; shape of fields.....; nearness to farm-	
stead.....	
Kind of orchards.....; condition.....	
Adequacy of trees for home use.....	
Climate: As to growing season.....; days available for farm work	
.....; healthfulness.....	
Neighborhood: Character of people.....; available	
labor supply.....	
Possibility of increase or decrease in value of land.....	
Possibility of selling farm.....	
Possibility of renting farm.....	
Desirability of farm as a strictly business investment.....	
Desirability of farm as a home or place to retire.....	
Adaptability of farm to changing economic conditions necessitating change	
of type.....	
Adaptability of farm for diversification or improved organization of the	
business.....	
Adaptability of farm for high yields of crops and desirability for livestock	
production.....	
Sureness of market for major crops grown.....	
History of farm as regards management of land with respect to keeping up	
fertility.....	
History of region as to development and speculation in lands as affecting	
present price.....	
Number of other well-developed farms in immediate vicinity which are success-	
ful.....How long have they been farmed?.....	
What are some of the operators' difficulties?.....	
How soon can the farm be made a going concern? <sup>1</sup> .....	

### 3. *Coöperation in Agriculture* <sup>2</sup>

Although much is made today of man's individualism, yet all about us are plenty of evidences that rural life can be made more satisfying through the collective efforts of the farmers themselves. In agriculture both as an industry and as a way of life we see the results of these collective efforts.

In the field of production the farmer is fast realizing that he can learn something from the methods of industry. Except in a minority of cases agriculture has not yet been found adaptable to the methods of large-scale production. But this has not deterred farmers from seeking some of the economies accompany-

<sup>1</sup> The student particularly interested in this phase of agricultural production may find it worth while to pursue the subject further in such standard works as: Lewis C. Gray, *Introduction to Agricultural Economics* (New York, 1924); G. F. Warren, *Farm Management* (New York, 1917); and R. L. Adams, *Farm Management* (New York, 1921).

<sup>2</sup> Cf. also Chapter 32 on the Coöperative System.



ing it by associating in groups. One finds members of associations over the country collectively buying their supplies. These may be purchasing associations which handle only those commodities used in large quantities, such as twine and sacks, fertilizers, and crates and boxes; or, perhaps, wholesale and retail stores which

are able to supply any want from a reaper and binder to a package of pins.

In the field of finance, also, there have been many attempts to develop organizations which would better understand the peculiarities of the agricultural problems and shape their policies accordingly. This is resulted in the establishment of credit unions, building and loan associations, and a Federal Farm Loan System. There is a large number of coöperative insurance companies covering fire, live stock, hail, drought, and other forms of hazard.



The machinery necessary for filling the silo may be coöperatively owned. Filling silo with green corn cut fine is a job which lasts but a few days and furnishes stock with succulent food all winter. The silos here are of the most modern hollow-tile type. (Courtesy Internatl. Harvester Co.)

The coöperative ownership of expensive pieces of labor-saving machinery has enabled farmers to eliminate much tedious hard work. The machine requirements on a modern farm involve a heavy expenditure; more, in fact, than most farmers are able to stand. Too often this has meant curtailing expenditures which should have gone to give greater comforts and conveniences in the home. And in many cases the machines—such as manure spreaders, silage cutters, wood saws, cultivators, and mowing and reaping machines—are used only for short periods during the

year. A group of farmers may easily get together and buy jointly such tools as these and so materially reduce the necessary individual investment in machinery.

In some localities this idea of joint ownership has been pushed a step further and has resulted in coöperatively owned creameries, cheese factories, bacon factories, abattoirs, cotton gins, and drying and canning factories, though this movement has so far had distinct limits. Coöperation has had a more successful development in marketing and storing than in the field of production. In fact the average person has probably heard much more of coöperative marketing associations than of any other form of joint endeavor on the part of the farmers because of the growing importance of such organizations as the Citrus Fruit Exchange and the Raisin and Prune Growers associations of California, and their relation to the consumer.

A very interesting scheme has been worked out in some communities which provides for the payment by each member of the community or association of a nominal fee which entitles him to the services of a veterinary hired by the community or association. Few individual members could afford to pay for this service as individuals, but the combined fees are enough to obtain the services of a competent person. The situation with farm animals is much the same as with humans. Preventive measures are always better than curative. The veterinary hired by the year is better able to act in an advisory and therefore preventive capacity. Many farmers are building up their herds through the coöperative ownership of full-blooded sires. In this way better milk and meat animals can be obtained and the hopes of the individual farmer for better stock are much sooner realized than they would be if he were compelled to wait until his own resources were equal to the strain.

Education and recreation have yielded richly to the joint efforts of the members of the community. Smaller schools are being displaced by larger and more central organizations. Busses call for children in the mornings and return them to their homes in the afternoon. Increased facilities and better teachers have been made possible through the economies of centralization. The development of community or social centers where meetings, farmers' institutes, plays and entertainments can be held,

are a result of and an incentive to the increase of coöperation. The good feeling and confidence which have been promoted at entertainments have without doubt been important factors in the development of economic coöperative ventures. Boys' and girls' groups of various sorts, such as pig, corn, and canning clubs have been of immense value in supplying wholesome recreation and satisfying the desire of youth for society. Community bakeries, laundries, and creameries have relieved the farm woman of much of the former drudgery of the farm household.<sup>1</sup>

On the whole, farmers have been slow to realize the importance



Busses such as these carry children to and from the consolidated schools, whose rapid increase within the last decade was made possible by hard surfaced roads and automotive transportation. (Courtesy U.S. Bureau of Education)

of joint efforts in solving their problems of production. Many discouraging blunders have been made in the attempts to determine the best methods. But now a body of information has been accumulated which will prove of much aid to newer groups. The Grange, the Farm Bureau, and various other federations are active in aiding the development of the coöperative spirit and helping to guide new experiments along tried paths.

#### C. MARKETING FACILITIES

##### 4. *Marketing*

We have already discussed the problem of increasing agricultural production by better uses of the soil, by new and improved

<sup>1</sup> This matter is discussed more at length in Ch. 9, below,

crop plants, by control of the hazards of the farming, and generally by better farm management. There is yet, however, another important phase of the agricultural problem to which we have given no consideration. This is the disposition of the produced crops, or, as it is usually termed—*marketing*.

As we have already pointed out, the primitive farmer is not vitally concerned with the problem of marketing until he has accumulated some surpluses of produce and has realized that there are other desirable goods in the world which he could obtain in exchange for some of his surplus. As new and improved methods of agriculture have been adopted, surpluses have increased and the problem of disposition has become more complex.

It was not such a long time ago that the principal marketing activity of the farmer consisted of an exchange of butter, eggs, cheese, smoked meat, or live animals with the coun-



The country store—at one time the farmer's principal market. Here he brought butter and eggs and took away sugar and flour. Many such stores are left and supply rural life with a special flavor, but coöperative buying and selling gradually make them obsolete.

try storekeeper for groceries, dry goods, and notions. The story of the gradual evolution of the market, agricultural and industrial, through varying vicissitudes and phases, would make an interesting story, but we are not primarily concerned with it here. Our concern is with the efficacy of modern marketing methods for the disposal of the produce of American farms.

During a relatively large part of the world's history the producer and the consumer have lived close together. In fact, in many cases, the producer and consumer have been the same individual. With the coming of the Industrial Revolution and the subsequent growth of cities, the separation of the country producer and the city industrial worker, who is the consumer of the products of the country, has made necessary the growth of our great modern sys-



tems of transport. Without the devices of transportation small rural groups would of necessity still be confined to tiny self-sufficing areas. Each group would have to depend upon the immediate outlying territory for its food resources, which would be unable in most cases to support a very large industrial population.

For a time, man transported upon his back the few articles which he had to barter. Later, the domestication of animals presented a means of freeing himself from this burdensome duty.



A city market. Farmers who are within trucking range devote most of their effort to raising produce that is salable in such markets. (Courtesy U.S. Dept. of Agr.)

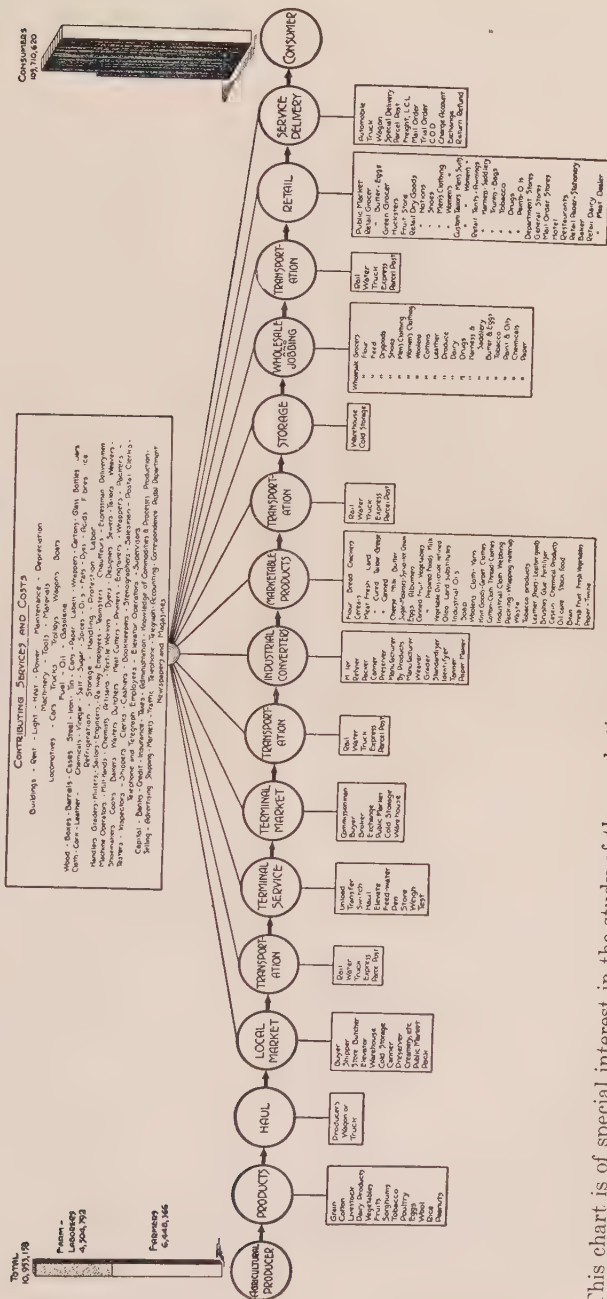
Canals and rivers were early pressed into service. But not until the invention and perfection of steam transportation did marketing reach its present stage of primary importance in the industrial system. Transportation may be said to include all the operations of transferring the product from the farm to the ultimate consumer.

The farmer's immediate transportation problem is that of hauling his products by team or motor truck to the local market. If the distance is great and the roads are good, the truck offers the best method. In isolated districts everywhere the development of good roads and the coming of the motor truck have amounted to much the same thing that the earlier coming of a railroad meant to the plains of the Midwest. And it is easy to understand why the farmer insistently demands greater and greater expenditures for good roads. As a means of carrying produce to the market and supplies back to the farm, the motor truck is a relatively recent innovation with the farmer, but it is one from which we may



## DISTRIBUTION OF AGRICULTURAL PRODUCTS.

JOINT COMMISSION OF AGRICULTURAL INQUIRY



This chart is of special interest in the study of the marketing process. From the producer to the consumer, the processes and institutions which help to make up the present complex market structure are shown. (From "Report of the Joint Commission of Agricultural Inquiry," H. R. Report 408, Part IV, 1922)

expect great developments in the near future. It offers him a method of getting to distant markets and getting back to his

work with the minimum expenditure of time.<sup>1</sup>

Of all the methods of transportation used in this country, the railroad is by far the most important. The zone of production is extended not alone by the lowering of freight rates but also by lessening the time required for moving such produce as cannot stand delay. The use of fast freights for shipping perishable fruits, and the refrigeration of cars, have done much toward getting produce to the market in usable condition.



These two pictures should explain why the farmers are interested in good roads. (Courtesy U.S. Dept. of Agr. and Lewis W. Hine)

To a less important degree, the use of heating appliances in transportation during cold weather has served the same purpose.

<sup>1</sup> Bettering transportation becomes important when we consider that about six per cent of the value of the crops, on an average, is taken to meet the expense of local and long-distance transportation service. Reduction of local transportation costs is dependent upon the construction of good roads for all-year hauling, upon more rapid methods of getting to market and back, and upon greater hauling capacity of wagons or trucks. In many sections of the country groups of farmers are developing collection systems whereby one of their own group or some one hired by the group daily or at regular intervals gathers and takes community products to the local market. This is a great saving, eliminating as it does the unnecessary trips of numerous individuals to market with part loads. This method is especially in vogue for milk and cream marketing. In the main the problem of freight rates is an involved one; a problem to be handled by individuals with special training and experience in this line. The large coöperatives have appreciated this fact and so have hired the best available talent to take charge of the routing and shipping of their products.

Water transportation is considerably older than steam transportation but at present is far less important in this country. However, it has certain advantages which should not be overlooked. Oregon and Washington apples are now being sent through the Panama Canal to the New York market. Water routes in this country might be utilized to a far greater extent than they have been in recent years. There is insistent need for the development of a national policy concerning water transportation. The opening of the St. Lawrence River so that ocean vessels may enter the Great Lakes and receive cargo as far west as Duluth, and the deepening of the Hudson River channel so



A trainload of cattle on the way to market. Good transportation is a considerable factor in efficient marketing. (Courtesy Swift & Co.)

that ocean-going vessels may continue up the river to Albany, are projects of great interest to the farmers as well as the manufacturers of the West. The wheat growers especially have felt that some such method of lowering freight rates would be a considerable help in solving their problem. However, the development of either of these waterways will not alone solve the difficulties of our agriculturalists.

Storage is a supplement to transportation in the marketing process. It may consist of storage on the farm, at the receiving station, or along the route for grading and reclassification. The danger of flooding the markets at harvest time, especially in the case of wheat, or of overtaxing the transportation facilities, necessitates the functioning of some storage scheme. This storage scheme may start with the farmer who is able to store his wheat in steel or concrete granaries or even wooden bins conveniently built, and, possibly, equipped with power-driven fillers or arranged so that the grain can be handled at least one way by gravity. Or it may start with the elevators of the local buyer or miller at the railroad or the coöperatively owned local elevator. Be-

sides enabling the farmer to place his wheat on a more stable market, wheat storage in a central place enables the farmer to receive warehouse certificates and obtain cash or credit for them. This he cannot do if he has stored the wheat in his own granaries. Besides the storage of wheat and other non-perishable products, there is much that can be done to climate waste and cluttered markets in the proper handling and storage of such articles as apples, potatoes, and vegetables. Again our storage problem here starts on the farm with proper storage cellars or buildings. The cost



Grading and packing apples for the market. (Courtesy Catlin Orchards, Montrose, Colo.)

of such equipment, however, is much too great for the average individual farmer to support properly. The need may, however, be supplied by some local concern or by the joint effort of the farmers of a neighborhood.

After many years of experience the farm and marketing expert have come to realize that in order to obtain the greatest returns from the many operations which must intervene between harvest and the final consumption of the farm products, there should be assembled, first of all, a volume of product so large that expenses may be reduced to a minimum. The most important element of expense reduced by this assembling is freight. As has already been stated freight charges amount to about six per cent of the value of the product. Shipping by carload lots saves from one-fifth to two-thirds of the freight expense of shipping in less than carload lots. As an example of this, an elevator having a



business of 400,000 bushels can reduce freight costs per bushel to about half those that go with an elevator handling 100,000 bushels.

Besides assembling, there is the job of sorting, grading, and packing. A little consideration of the types of product which the farmer has to market will explain the necessity for methods of sorting and grading. Not only do the types of product differ, but even units of the same product vary in size and quality. As an example, we might cite the case of eggs which must be sized and candled. It is the exceptional farmer who produces so large a quantity of any one product that he can carry on the marketing process direct. Rather, most farmers have perhaps two or three acres of potatoes, less than a carload of apples, and varying quan-



A pile of containers for agricultural products. An opportunity for standardization here. (Courtesy U.S. Dept. of Agr.)

tities of vegetables such as cabbage and carrots; so it is evident that there must be some centralized agency for receiving these products from the different farmers, sorting and grading them, putting them into packages, and caring for their marketing.

Grading decreases the cost of marketing by reducing to a minimum the quantity of product which must be transported or stored.<sup>1</sup> Obviously, the shipping of unsorted, ungraded commodities would be a distinct loss to the farmer. First of all, the price offered for the ungraded commodity would be considerably less than that paid for a well graded, dependable article. The consummation of the marketing transaction is the purchase by the ultimate consumer; and so if an appeal can be made to this

<sup>1</sup> Freight and handling charges consume relatively so much of the value of the product that it is important for grading to be done carefully so that no imperfect or damaged product is shipped.

consumer by developing a standardized product with perhaps some trade name or other means of his knowing its dependability, an important step has been taken toward increasing the net return of the farmer. Grading saves the time of the consumer by enabling him to buy exactly what he wants. Another important point in regard to adequate grading and standardization is that it is possible to handle sales by description; and this saves much

time and expense for both the seller and the buyer. Also, a well graded article stored under proper conditions furnishes a convenient basis for loans.

The method of carrying out these operations, that is, assembling, sorting, grading, and packing, depends upon the article, its perishability, and the economic position of the farmer producing the article. The farmer



Collecting milk and cream. The work of this man saves the time and effort of many who would otherwise have to make trips to a central creamery. (Courtesy U.S. Dept. of Agr.)

himself may be a large enough producer to maintain his own storage place, and if he has developed a sufficient reputation, may handle the marketing either by sample or by description. The assembling and grading, especially of a single commodity, may be done by some individual or firm in a central location, such as the local grain elevator in a small town; or it may be that the assembling is done by producers themselves, organized coöperatively for building a warehouse and hiring experts to take charge of the assembling, grading, and sale. These may be either small local associations or large groups such as the Citrus Fruit Growers of California.

Coöperative farm marketing has commanded much attention in the last several years and without doubt is destined to receive

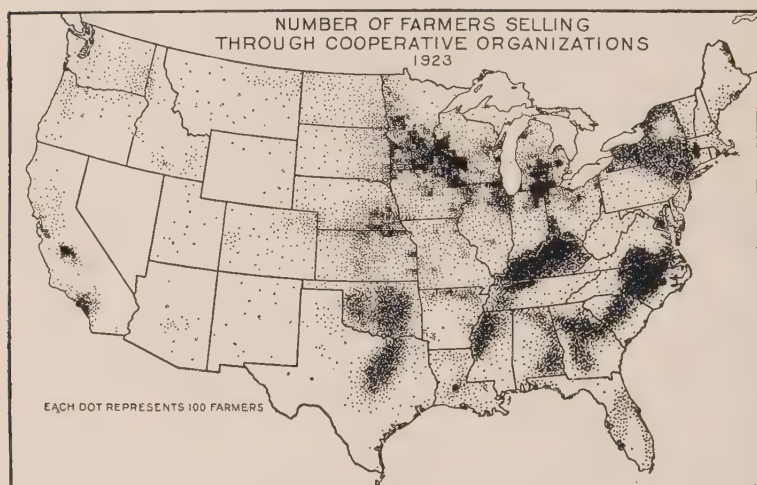
more in the future. As we have already pointed out, marketing is the problem of distributing things produced, so that the farmer's interest will naturally be more in distributive coöperation than in consumers' coöperation.<sup>1</sup> The desire to save time, energy, and money, coupled with a certain neighborliness, early led the farmers to pool their product in order to have a carload or perhaps to take turns in going to the distant market with weekly accumulations of eggs and butter, and bringing back such things as sugar, coffee, a new pitchfork, and some dress material for some of the neighbors. These were the small beginnings of larger ventures. As marketing became a more important factor in the farmer's problem, coöperative effort also increased in importance.

Perhaps the most interesting development at the present time in this field is the so-called commodity coöperative. A commodity coöperative might be defined as a coöperative marketing arrangement which deals only with one commodity and includes most of the producers in its entire production area. The first important commodity coöperative in the field was probably the Citrus Fruit Growers of California. However, recently there has been a great development of similar associations. The prune, raisin, and walnut growers of the same state are now organized. The cotton growers and tobacco growers of the South are following. A study of these really huge marketing coöperatives reveals that they have a single purpose—that is to market their commodity in such a way as to obtain the maximum return. Their general scheme of organization is somewhat as follows: Many producers of some commodity, such as cotton, eggs, or fruit, in a given region are organized into a marketing corporation. Each member contracts to market all the product he raises through this corporation. Warehouses are built. Experts in grading and marketing are employed and the farmer has only to deliver his crop to his local warehouse or grading establishment and receive a warehouse receipt for it. He also agrees to endeavor to produce a product of a definite type. For example, when the egg raisers of California decided to attempt the capture of the white-egg market of New York, each farmer agreed to keep only white Leghorn hens. By this method, a more or less standard type of product was obtained. This did not, however, eliminate the necessity for careful grading.

<sup>1</sup> Cf. Chapter 32 on Consumers' Coöperatives.

As we view the operation of any of these large organizations, such as the Citrus Fruit Growers, we must not forget that their present well conducted and efficient organization has passed through long periods of ups and downs when many times failure seemed imminent. At present these organizations have on their staffs some of the best marketing experts in the country. One of their policies is to pay salaries sufficiently large to obtain the best service and counsel in the country.

There are still, however, many commodities which could be



(Courtesy U.S. Dept. of Agr.)

organized in this same way. Wheat, potatoes, and sugar beets are commodities which would especially lend themselves to improved marketing schemes. They offer, however, some difficulties which are the result, in the main, of the wide areas in which they are produced. One of the fundamental tenets of successful commodity coöperation is the concentration of production in one main area.

A study made by the United States Department of Agriculture gives some idea of the extent of farmers' coöperative marketing. The Department has record of about 10,000 farmers' local organizations. About 100 large regional associations have approximately 900,000 members. These are mainly associations of farmers raising fruit, wheat, wool, cotton, and tobacco. There



are about one-half million tobacco growers in seven associations, the largest of which among the Burley growers has over 100,000 members. In Minnesota, the Coöperative Creameries Association has selling organizations for 475 local creameries. The New York Dairymen's League Coöperative Association has 70,000 members and does a business of \$70,000,000 annually.

According to Dr. Theodore Macklin, Professor of Agricultural Marketing at the University of Wisconsin, the main economic benefits of efficient coöperative marketing associations may be summed up as follows: "Coöperation gives farmers the net profits of marketing, but this amounts in the cheese industry to only one cent for each dollar's worth of produce sold. It reduces the cost of marketing, so far as this may be done; this saving of marketing costs results to farmers in about four times as much financial gain as taking over the middleman's net profit. It improves old and creates new marketing services for members. These are termed tangible or financial benefits. There are also intangible or non-financial gains. Coöperation readjusts standards of production; gives farmers confidence in the marketing system, convincing them that their products are marketed as well as they can be; stimulates the development of leadership; and gives farmers experience in commerce."

An article in the *Country Gentleman* of May 24, 1924, by Marion Hardy pictures the results which compulsory coöperation in grain marketing has brought in Queensland, Australia. The State Wheat Board was organized originally for but one crop, that of 1920-21, with the approval of seventy-two per cent of the farmers. After a year's trial, eighty per cent voted for a continuance. The plan provides that all wheat raised in the state, less requirements for seed, be turned over to the State Wheat Board. This Board alone has the privilege of buying and selling wheat. Transportation agencies are forbidden to handle any grain without a written permit from the Board. The government owns a number of wheat storage houses and the expense of building others when necessary is borne by the Wheat Board. Wheat is received at appointed centers and graded by experts in the presence of the grower. On receipt of a voucher which he is given the Board makes a preliminary payment. The Queensland price to the farmer has been considerably above the market price in

the United States. One unique feature of the plan is that railroad freight charges are pooled and charged to general expense. This has meant lower freight rates.

The farmer can do much towards a better marketing policy by the study of general marketing trends, and by consideration of the business cycle and its application to his own problems. There are many opportunities now open to him to receive market information from day to day, such as the market letters sent out

by the Government and the more recent market quotations broadcast via the radio. The Department of Agriculture and the various state agricultural colleges are endeavoring to aid the farmer in a better understanding of the trends of production in this country, and to guide his day-to-day efforts into the best channels possible.

We see that the problem of raising the level of living for the farmer involves not alone getting larger yields from his fields but also utilizing the most efficient



Receiving market reports (Courtesy  
U.S. Dept. of Agr.)

methods for distributing these products to the ultimate consumers.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What is meant by the term "farm management"? Point out significant differences between management on the farm and management in the factory.
2. Suggest advantages which you think might accrue to the farmer through coöperative endeavor. Differentiate between the farmer as buyer and the farmer as seller.
3. Why is marketing a farm problem? Show how improved marketing influences the general level of rural production.
4. Upon what basis will the average farmer probably determine the proportion of the factors of production (land, labor, and capital) which he will use? Is this good business? good economics?
5. Why should the farmer be interested in the grading and standardization of his product? Have storage and refrigeration altered the problem of agricultural production?
6. Can the farmer benefit from a careful study of market quotations and the general "up and down movements" of business activity? Explain. Is there any relation between the production of pig iron and the price of wheat?

## Section B: The Remaking of Rural Life

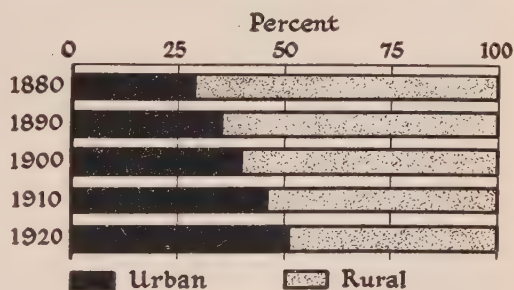
### CHAPTER 9

#### MAKING RURAL LIFE MORE SATISFYING AND BENEFICIAL

##### 1. *Improvement in the Kinds and Hours of Work*

Another side of the effort that goes on constantly to raise the levels of living through efficient production is that of making the rural life not only more efficient but more satisfying and beneficial in other ways, by eliminating the poverty we have already discussed, and by bringing into rural life more of the instruments and appurtenances of life that we associate with comfort. But the elimination of poverty involves complex changes and the coming in of comfort

is not achieved by wishing. It is true to say, however, that the immediate past has seen very great advances in some aspects of rural life, such as (1) the improvement in the



Urban and rural population in the United States, showing a definite trend cityward but nearly half the population still rural. (U.S. Census Bureau statistics. The Census Bureau classifies as urban those residing in cities and other incorporated places having 2500 inhabitants or more)

improvement in the kinds and hours of work both for men and women, (2) the elimination of the isolation and solitude of the farm, (3) the improvement in living standards, (4) the revision of esthetic standards, and (5) opportunities for the intellectual life. Each of these will probably be somewhat clearer for a little further discussion; also some discussion ought to help us to see more clearly the road we must follow in improving rural life.

Improvements in the way in which work is carried on are very nearly equally conspicuous for both men and women. For men,

for instance, there is far less of the heavy, mucking work of the primitive farm and much more of the sort that requires a certain mechanical cleverness and a calling out of other than merely physical abilities; and for women there is less need for the heavier duties of farm life than in the past, and more need for forethought and planning. Much of the work of carrying wood and water and of soap-making, baking, and washing has been eliminated.

### HOUSEHOLD CONVENIENCES IN MOUNTAIN AND OTHER RURAL SECTIONS

AREA	PER CENT OF RURAL HOMES HAVING						
	Tele- phone	Sewing Ma- chine	Wash- ing Ma- chine	Screened Windows and Doors	Water in Kitchen or on Porch	Bath- tub	Sink
The mountain county	3	68	2	6	5	*	1
Rural areas in other sections † . . . . .	72	95	57	96	65‡	20	60

This table shows two things conspicuously. (1) How in fairly prosperous rural areas, the use of modern conveniences has spread, and (2) the contrast between poor and prosperous areas in this respect. In some places, such as the mountain county cited here, country dwellers live almost as their ancestors lived for many generations.

\* Less than 1 per cent.

† From *The Farm Woman's Problems*, States Relation Service, U. S. Department of Agriculture.

‡ In kitchen only.

Along with the advent of various kinds of cultivating and harvesting machinery which took place in the period immediately following the Civil War, which made life so much easier for men on the farm, there came also a flood of new devices that revolutionized kitchen and household management for the woman. It is no longer necessary to swing the scythe throughout the long back-breaking days of the harvest and haying seasons; and it is possible now to delegate to the horse or even to the tractor the burden of much of the preparation of the soil and the cultivation of the crop. Wood is sawed now with the aid of power machinery. And there are many other appliances about the barns and stables that save effort and relieve the strains upon



the human mechanism that were borne by the old-fashioned farmer.

But there are an equal number of devices within the household that make work there easier than it used to be. Many of the responsibilities for clothes-making, for the provision of food for the future, and for the carrying out of such recurring tasks as cleaning and washing have been lightened by the coming into use of such generally used household devices as the vacuum cleaner, the washing machine, the electric iron, running water, and electricity



Taking some of the drudgery out of farm life. (Courtesy Internatl. Harvester Co.)

and gas for cooking, lighting, and heating. Then too there has been the almost complete taking over by the factories of the provision of such things as bread, soap, canned foods, and clothing, all of which once had to be provided in the kitchens of the farm.

It must not be imagined, of course, that in either of these departments of farm life so much has been done that there is not great need still for improvement. There is still this need. In the first place there are many tasks still performed by the hard labor of women which machines will perform in a not very distant future; and in the second place it is also true that there are a very great many farms where machines have not been introduced to do the tasks that they do so well on many other farms. We fail conspicuously in applying the knowledge we have. This is, of course, only to say that machines have not been given the opportunity to do all the work that they are able to do, and that eventually we shall require them to do. This is perhaps more

true of household devices than it is of machines which assist in the work of producing crops, but it is sufficiently true of either one. We need to make all farms like the best ones, even more



Electricity in the farm home. Perhaps nothing has contributed more toward relieving the drudgery of housekeeping on the farm than the advent of electrical appliances. (Courtesy General Electric Co.)

than we need to push forward the improvement of the best. An interesting comment on this is furnished by the figures of the National Bureau of Economic Research, which show the hours that are worked by hired women and men on the farm. Of course these do not give us the picture of work by those who do the hiring,

which is probably as long or longer, but they are indicative.

#### HOURS OF WORK ON FARMS<sup>1</sup>

Females employed by the day . . . . .	40 hours per wk.
Females employed by the week . . . . .	50 hours per wk.
Males employed by the day . . . . .	50 hours per wk.
Males employed by the week . . . . .	63 hours per wk.

#### 2. *The Elimination of Isolation*

The elimination of the isolation and solitude of the farm is a problem of considerable importance too. It is one, curiously enough, that would not be raised in a European community, for there farmers live together in villages and go out to their farms to work. It is peculiarly an American problem because in the United States farm families live rather upon the acres they cultivate and so each farmstead is separated from every other, some-

<sup>1</sup> From *Employment, Hours and Earnings in Prosperity and Depression*, 1923. The figures cited represent the modes for the various groups for the United States in 1920.

times by a considerable distance. A community is therefore a different kind of social group from any familiar to urban people. It is a group that has little physical contact, whose individuals actually meet only at infrequent intervals. Farmsteads remain separated, for the most part, as they always were, by considerable actual distances; but there have been mitigating circumstances recently which have tended to lessen the effects of separation.

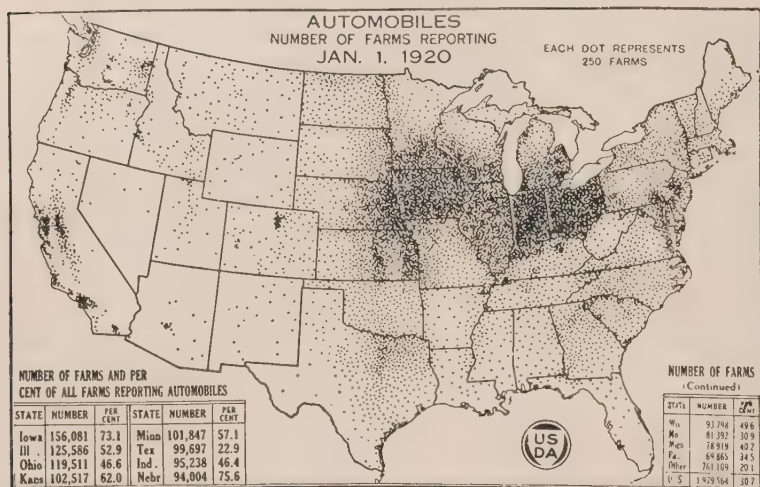
Most conspicuous among these have been the telephone, the motorcar, and good roads. In this connection it may be interesting to know how much quicker such instruments as the automotive vehicle are adapted to consumption purposes than to those of production. On the 6,500,000 farms of the United States, there are 4,200,000 motorcars; but only 450,000 tractors and 370,000 trucks. Sixty-five per cent of American farms are equipped with motorcars but only seven per cent with tractors and six per cent with motor trucks. These motorcars have tended to make possible a participation in community life that was unthinkable on



A rural mail carrier, a connecting link between the farm and the outside world. Most carriers now are equipped with Fords. This one still prefers Dobbin. (Photo Hine)

the American farm of twenty-five years ago. It ought also to be remembered that at that time there were no radios and, even, no rural delivery of mails. Then each farm family had very nearly to be its own community and this isolation from the influence of outside cultures tended to the development of provincialism and to the retardation of the spread of new ideas and of the knowledge of new inventions and processes. Also it had its individual effects upon each of the members of such a community. When the family was small or after the children had grown up and left the family homestead, there was a solitude about the work of both men and women that was most depressing to so

gregarious a species as mankind; and the relief from this solitude that came with the new inventions was one of the most welcome and necessary changes that ever affected rural life.



Two-fifths of the 2,000,000 automobiles on farms in the United States, Jan. 1, 1920, were in the Corn Belt. From one-half in the eastern portion to three-fourths of the farms in the western portion of the Corn Belt had automobiles, and about half the farms in Wisconsin, Minnesota, the Dakotas, and California. Eastward from the Corn Belt the proportion drops to one-third of the farms in New York and one-fourth in New England; southward it drops to one-seventh in the Carolinas and Georgia and one-twentieth in Mississippi. An automobile is of little help to a negro cropper, or even a poor white tenant in the South, either in marketing his cotton or in attending to his business. (U.S. Dept. of Agr. *Year Book*, 1921)

### 3. Improved Diet, Sanitation, etc.

There have been improvements also in living standards that ought to be mentioned. Health, for instance, has been distinctly improved. Partly this is attributable to the considerable dietary advice now available from various Government bureaus. One important aspect of the work of the county farm bureaus has been in connection with the improvement of standards of household budgeting, and the attaining of rational and balanced standards of consumption.<sup>1</sup> We know now that in spite of the continuous

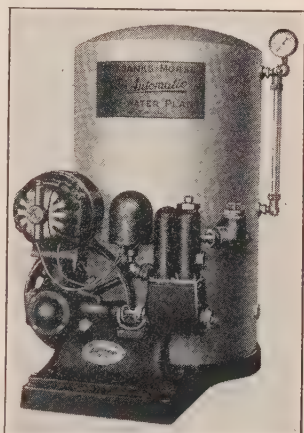
<sup>1</sup> Home economics departments of the state universities also issue many bulletins containing advice of this sort.



physical activity of both men and women on the farm, there was a quite common tendency toward malnutrition and dyspeptic indigestion which followed from the improper methods of cooking and eating that were a tradition of primitive pioneer life in America. As physical labor lightens, diet has to lighten also.

New ideas are also making their way into general knowledge concerning sanitation and the general requirements of higher standards in housing. The farm home of the present in many cases contains such relatively new devices for improved health and comfort as bathrooms, furnaces, sewers, hardwood or linoleum floors, and better provision for light and for ventilation. The contrast between homes built during any past time and those that are built on modern farms at present is most striking in these respects. We now have learned to value the better homes of an earlier time for their architecturally lovely exteriors; but this does not blind us to the fact that they offered very few of the requirements we have learned now to expect from a home in the way of the comforts and amenities of life. There is a very real improvement in this respect, as may perhaps be inferred from certain facts that have been revealed in some of the investigations of the conditions of rural life by the United States Department of Agriculture. The first of these studies, for example, was made in Livingston County, New York, which was chosen because it was typical of moderately successful general farming.

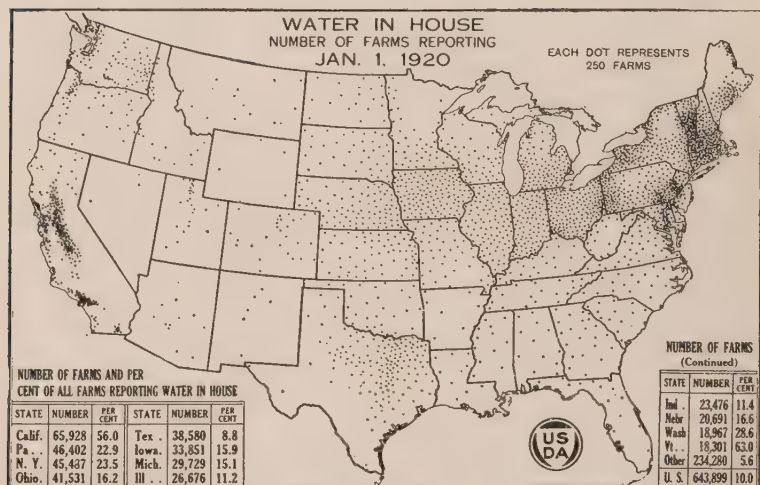
There it was discovered that water was piped into about twenty per cent of the houses, gas or electric light was found in twenty-five per cent, and automobiles were owned by more than seventy-five per cent of the farmers. These figures are unquestionably high for the whole country because Livingston County is a relatively prosperous agricultural district; but they show the extent



An automatic water system for the farm home. Running water in the house has now become almost a necessity in this country, though a tragically large number of farm homes still lack it. (Courtesy Fairbanks, Morse & Co.)

to which rural life is being improved in those localities where prosperity is sufficient to permit the expenditures that have to be made for the comforts of life. It must be remembered in all this that the possibility of these improvements is relatively recent. Bathrooms and furnaces were not used even in the ordinary city home of twenty-five years ago, and their adoption, therefore, into nearly one-quarter of the farm homes of a typical rural county is a phenomenon of some significance.

Another aspect of improvement in health that may very well be



About one-half of the farms in New England and in California have water piped into the house, about one-fourth of the farms in New York, Pennsylvania, Oregon, and Washington; about one-eighth of the farms in the Corn Belt; and one farm in 50 to 100 in the Cotton Belt. These differences are due, in part, to differences in per capita rural wealth in the several sections of the United States, and in the percentage of tenancy, and in part to differences in the consideration shown for the health and comfort of the housewife. (U.S. Dept. of Agr. *Year Book*, 1921)

mentioned is the fact that better roads and automobiles make possible quicker access to hospitals and civic health centers as well as local physicians; and these are important in view of the emergencies that often arise in isolated communities. Formerly the city hospital was an impossible distance away and if there were an operation to be performed, for instance, it usually had to be performed by the general physician in some part of a farm

home that was, to say the least, extremely ill adapted to asepsis and the general treatment of critical illness. The confidence that farm families feel in the quality of the life they lead is immeasurably raised by such improvements as these, and the prospect of a new attitude toward permanent farming life is made considerably brighter by just such advances.<sup>1</sup>

#### 4. *Better Education*

Education ought also to be mentioned among the improvements that are very rapidly taking place in rural life. America is not



Interior of a country school of the old type. The new union schools make other communities ashamed of such educational backwardness as this. (Photo Hine)

yet very far removed in time from the little red schoolhouse that we read of in the literature of nineteenth century America; but the little red schoolhouse as an educational institution has been fearfully overpraised. It was sufficient perhaps for pioneer needs. It accomplished a great purpose in our history, but it was without the most elementary provision for the educational devices that we think necessary now for the training of children, and perhaps no

<sup>1</sup> For the background of rural culture in America and especially for an illuminating treatment of early social conditions and their reactions on health, education, recreation, etc., James Mickel Williams's *Our Social Heritage* (Knopf, 1925) is an unfailing source.

other comment need be made upon its limitations than that one teacher was provided for all children between the ages of six and twenty.

Such a situation could not possibly result in the efficient schooling of more than a very small percentage of the very brightest of the pupils; so that with the coming of the automobile and the development of good roads one of the earliest changes that took place in education was the provision of free transportation for rural



A demonstration and exhibit train. A form of adult education which is growing in favor in the rural sections. (Courtesy U.S. Dept. of Agr.)

children from their local homes to central schools located where they could be reached with the least effort by the greatest part of the community. These central schools can be far better than the old schools were because they can provide specialized education

in a number of ways. They can have teachers for all the different ages and even for different capabilities. They can offer in the older years a greater variety of possible occupational specialization and training and they can assist very greatly in the movement that is going on in the whole United States for adult education and particularly, of course, in the technique of agriculture and of home management.

One result of this, as would be expected, has been to increase the number of students trained to take up the work that is offered in agricultural colleges; and from this perhaps we shall gradually come to have a farm population with the same access to and the same proportion of people who have had university training as is found in comparable urban classes.

A factor of somewhat less importance than rural education but still worth mentioning has been the growth of the rural press in the United States, especially the development of agricultural



weeklies<sup>1</sup> devoted to the technique of farm operations and to the betterment of rural life generally. The most casual study of these journals must make it clear to the student of contemporary civilization, if it does nothing else, not only that agriculture is an industry with a technique and a literature of its own but that it is a way of life that somehow has the possibilities of advancement; and that its people intend to create out of a not too favorable present a future that shall be better for all who are affected by it.

The rural press is expressly devoted to this uplifting of rural life and meets the various problems of farmers honestly and with the intent to help in permanent betterment. Unfortunately the local rural press, however, has distinctly degenerated. The little newspapers that once had so much of the color of community life have become now little more than advertising media for merchants. Editors are no longer of the old strain, vigorous in the advocacy of community betterment and loyal to the peculiar culture of the locality, but are mere rubber

stamps for majority opinion, economically terrorized and colorless. Reading matter in local papers is mostly the "boiler plate" furnished by big agencies that are deeply tinged with one or another sort of propaganda. One must look to the farm weeklies of the sort that have been mentioned, rather than to the small-town newspapers for a genuine representation of rural opinion.



The community center at Waverly, Pennsylvania. Many such institutions are springing up in rural sections everywhere in the country. Not all of them are so handsome as this one, but many are larger and quite as well suited to the purpose. (Courtesy playground and Recreation Association of America)

### 5. Recreation and Its Improvement

Recreation, as may be imagined, has changed very greatly in rural life. Whereas once it was very difficult for people to come together in social gatherings on account of the difficulties of trans-

<sup>1</sup> *Wallace's Farmer*, *The Rural New Yorker*, *Hoard's Dairyman*, and many other weeklies are representative of this vigorous rural press.

portation with only horses and wagons for conveyance and perhaps muddy or dusty roads by which to travel, now the motorcar and good roads have made it very much easier. Social gatherings are therefore very much more frequent and farm life takes on something of the highly socialized character of urban life. There are few farms, at least in the eastern part of the United States and the Middle West, which are so far from community centers as to make it impossible to travel to them for an evening meeting, lecture, or moving picture; and in fact these forms of recreation have become very frequent; but also in this connection it must not be forgotten that the radio has been of special use to the farmer for recreational purposes. No very lengthy description is needed to understand the difference it makes to a farm family to be able to listen to distant orchestras and to overhear the proceedings of distant meetings of various kinds. It has had the effect of making the farm family feel itself to be more a part of the great world and less isolated and self-dependent. It may also be said that the cheapening of popular literature has had somewhat the same effect, although it has been perhaps a lesser factor than the radio, for there are few families now who are not kept in touch with the doings of the world through the newspapers and the weekly magazines, which, if they have very low standards of taste, are at least a crude medium for the exchange of ideas.

#### 6. *A Changing Rural Culture*

These new contacts with contrasting cultures through the press, the radio, and the moving pictures have inevitably made for a revision of local standards, so that the culture of rural communities tends all the time to become less differentiated and more alike. This is partly a favorable circumstance and partly an unfavorable one, for it has caused the good as well as the bad elements of local culture to be given up almost entirely and has informed the rural community with the cultural characteristics of that part of the world upon which it depends for its amusement and its ideas—that is to say, the city. That this can go very far any one who is familiar with modern rural life can testify. Fashions, recipes for cooking, and perhaps even the development of slang, have come to be, to a very great extent, not elements of a localized culture, but phenomena common to the whole country.

The difficulty with this is, of course, that the fashions originating in cities are intended to be urban fashions, that the recipes also are intended for city tastes, and that the slang is likewise efficient for the expression of city ideas rather than country ones, and that none of these is entirely at home in rural America. So that although there is perhaps a gain in the fact that the whole country comes to feel more nearly the same emotions, and tends, therefore, to become more unified, it loses at the same time some of that precious quality of uniqueness that has always been the mitigating circumstance of provincialism everywhere.

However, whether on the whole this development is good or not, we know that it exists and will continue to exist, that local differences will become less and less important, and that wider and wider areas will continue to have more and more in common. If we happen not to approve, we can at least take some satisfaction in knowing that the opportunity for the development of the intellectual life grows greater along with the loss in local mannerisms, for not only do newspapers and the radio bring amusement to the rural home; they also bring contacts with all the fields of scientific endeavor and the fresh impulses that must radiate from the centers of culture, however hidden the kernel of goodness may be in outer layers of worthless vulgarisms.

There has been, it is worth noting, a considerable beginning in the United States of a school of modern literature devoted to the social problems that are peculiar to rural life. The main characteristic, perhaps, of this literature has been a critical self-examination of rural communities and a weighing of the worth of the life that is lived there, and if there has been more acrimonious satire than helpful suggestion in it, this is perhaps because we are becoming self-conscious and are thinking of self-improvement; it may be also partly because satire usually paves the way for helpfulness. And so, although *Main Street* and *West of the Water Tower* seem to condemn American rural life as a whole, there are also numerous books concerned with the study of rural life<sup>1</sup> which

<sup>1</sup> See, for instance, C. J. Galpin, *Rural Social Problems* (1924), and other books of the Century Rural Life Series. Professor L. H. Bailey of Cornell and Professor Eugene Davenport of Wisconsin have done notable pioneering work in this field. The student will feel well repaid for investigating their writings. And see also in this connection various volumes of the papers and proceedings of the American Country Life Association, published by the Univ. of Chicago Press.

more or less successfully make the attempt to select from the features of rural life those which are most helpful for the future and most calculated to develop into the kind of culture that we should wish for rural America.

It is in this searching self-examination that the greatest hope for the future lies, and it is through the reconstructive activities that begin with self-study that rural life will ultimately come to have a rejuvenated cultural system. It must never be forgotten that agriculture is not only an industry but also a way of life, just as manufacturing is not only an industry but a way of life; and that the two have had developments so distinct and so different that they can, after all, have little in common. It is by the recognition of these differences in development and needs for the future that we can perhaps best provide for a rounded national life which includes both in proper proportions and is developed to the fullest extent of which each is capable.

Having now given some attention to the possible ends to be sought in the productive activities of rural life—(1) increasing production and (2) making rural life more satisfying and beneficial—we may go on to examine the means of attaining these same ends in the other great division of human productive activity, manufacturing and urban life, following the same general plan of considering first the possibilities of increased production and then the possibilities of making the working life better.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. List all the operations about the farm which were formerly done by hand. In which of these operations have power and labor-saving devices replaced hand labor? In what outstanding way has this affected rural life?
2. Is isolation a problem of economics? Why?
3. Would you expect the diet of the farmer to differ materially from that of the city dweller? What part does diet play in the economic welfare of any group?
4. What contribution can education make toward a more satisfying rural life?
5. What is meant by "rural culture"? What does it include? Point out ways in which you think it is changing. Give your reasons as to why these changes are taking place.



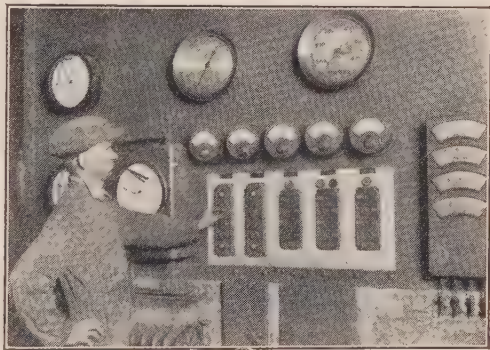
## *Section C: Urban Productive Efficiency*

### CHAPTER 10

#### INCREASING PRODUCTION BY MORE EFFECTIVELY USING PHYSICAL SCIENCE

##### *1. Man and Physical Science*

Perhaps man's most insistent problem in the past has been to supply himself with a more liberal quantity of the necessities of life than Nature was willing to bestow gratuitously. And whether it was the planting of the seed and harvesting, spinning and weaving the fiber into cloth, or cutting the tree into shapes and sizes better suited to his needs, he was constantly faced with a problem which has challenged all his inventive ability. It is a struggle which started long before our period of recorded history. If we could, by some magic, turn time back and view the early struggles of prehistoric man, we might perhaps find him delighted over the discovery that by



A combustion engineer in the control room of a large power plant. The age of primitive levers and wheels seems a long way back in social evolution. (Photo Hine)

the use of a pole as a lever he could roll a rock to the mouth of his cave and so protect his few supplies while he was away at his hunting. Or we might find another of his contemporaries equally delighted over the accidental discovery that a section of a round log placed under heavy objects greatly facilitates their being moved. Out of this latter experience the wheel

eventually evolved. And it is so that the primitive inventor experimented and manipulated until he had developed many other new tools.

It was not until he had had some success in this, crude as the new tools were, that he was really on the road toward a solution of his problem of securing more food, more clothes and better places to live. But it has been a far cry from the time when the simplest modifications of the lever, the wheel, and the inclined plane constituted the working tools of society up to the present age of machines. We, who are so surrounded by tools and machinery that we have ceased to marvel at the intricacies and possibilities of modern inventions, find it hard to visualize the age of the simple lever and wheel.

The efforts of certain spirits, motivated either by desire to obtain assistance in their work or by sheer love of manipulation and invention, gradually laid a foundation for the coming of a new era, an era when the necessities of life were to be had in far more generous quantities. Industry, which, in a sense, is merely the proliferation of tools, slowly assumed an important place in the economy of mankind. Many now turned from herding and sowing to mining, forging, and weaving. While kings and prime ministers busied themselves with wars and intrigues, artisans were combining and recombining wheels, rollers, pulleys, and belts, endeavoring to devise mechanisms which would supplement the work of the human hand. Bit by bit were added the elements which were to make possible the Industrial Revolution. Levers, inclined planes, and wheels in new and changed forms ultimately evolved into the steam engine, the loom, and the printing press.

At first man was himself forced to supply the power for the devices which he had invented. But the same urge which had brought about these inventions prompted him to find a source of power to supplement his own energy. It was but natural that he should harness the animal which he had domesticated and which had hitherto supplied him with meat or leather, or had perhaps been utilized for transporting light loads or pulling crude plows. By means of treadmills and sweeps, the horse, the goat, and even the dog could furnish power necessary to pump water on to the field, to crush sugar cane or to grind grain. Man had indeed now entered a new era. He possessed machines to do laborious jobs

better and easier than he had been able to do them; but, more important still, he had contrived in large measure to release himself from the necessity of furnishing the power to work these machines.

Not even these great attritions upon Nature satisfied the inventive faculties of man. He had discovered that the sail on his boat would eliminate much of the tiresome labor of rowing or paddling. Why, he asked himself, could the wind not be harnessed to his pump and mill in place of his horse or ox? So he fastened sails to extended arms in such a way that the wind caused them to revolve—and the ancestor of the modern windmill was complete. It was not a long step from the utilization of wind power to the harnessing of falling water. Man now had sources of power which were capable of running his machines much faster than the animals could and so would pump more water or grind more grain; in a word, enable him to live better.

He had by this time begun to appreciate more fully the world about him. He had ceased to fear the wind and the waterfall as the manifestations of some unfriendly power, since he had harnessed them to his machinery. As a result of his experience he had slowly come to a more realistic appreciation of the world about him. Otis T. Mason, the American anthropologist, has listed the factors involved here under the following five heads:

*Raw materials* of almost endless variety and usefulness;

*Motive power* from simple muscular energy to the most complex forms of force;

*Tools and machinery* in ever-changing types;

*Processes of fabrication*, simple, complex, and compound;

*Products*, things sought for, with which man nourishes and supports his life.

The invention of new tools and machines necessitated the harnessing of new power sources. The use of new power sources usually necessitated greater refinements in existing machines. Fickle winds might not blow for days; consequently pumps often lay idle and fields became parched. The stream which tumbled down over mountain precipices might be far from the place where its services were most needed. The solution to these and many other problems came through the harnessing of another force with which man had long been familiar—fire. It had been used to warm his house and cook his food; also it had found uses in smelting and

working metals; but never yet had it supplemented the energy of animal, wind, and water power.

It needed a Papin, a Newcomen, and a Watt to find the means of utilizing the potential possibilities of fire. And from the early efforts of these men a source of power developed which was to alter the whole structure of society and bring about one of the most

1880 3.8

1923 40.3

far reaching changes yet experienced by man-

kind. With coal as the

Production of pig iron in millions of gross tons, United States. The Industrial Age was founded on coal and iron; it still rests there, though there are signs of change. The contrast of 1880 with 1923 is a fundamental view of the way the world has changed since then. (U.S. Census Bureau statistics)

source of fuel energy and the steam engine to transform this energy into available power for the mill or mine, industry found itself freed in

large part from the whims of the wind. Man no longer needed to construct his factory near the water fall, if the fall happened to be situated where other conditions were unfavorable for his work.

## 2. *Power and Its Possibilities*

A survey of the power sources being utilized in the world today would show the following three general classes: (a) vital forces—muscular power of men and animals; (b) gravity—energy of the wind and flowing water; (c) chemical forces—energy of fuel. The third one, energy of fuel, is, perhaps, the most important in our present industrial organization, whether in the form of steam, gas, electricity, or compressed air.

The principal source of all energy is the sun. Food for man and beast is largely dependent upon the sun. The coal and petroleum deposits are the stored up sun-energy of a past period. The sun's rays lift into the upper atmosphere enormous quantities of water which later are released as rain or snow on hill and mountain peak. This water inevitably flows again toward the sea, and in so doing furnishes the energy that operates countless water wheels. But even though the sun's rays are the fundamental sources of all the energy we use, we are at present able to utilize them only to a limited extent. We move closer, however, as time passes, to a more direct and efficient use.

In some parts of the world men and animals still work pumps



and grind grain—in general, supply the simple needs there are for power in such places. Animals (more especially horses), however, yet furnish the major supply of power necessary to pull the plows and other implements on the farms of even so advanced a country as America. They also furnish the greater part of our hauling power. In spite of the spectacular rise of automotive transportation, it is the horse that hauls most of the farmer's produce to market and brings his supplies back to the farm. Nor has the horse been entirely replaced by the motor truck for city hauling. In spite of the fact that Los Angeles and some other cities have barred horses from the streets, they seem to be increasing in use in other cities—notably in New York.



A crude pump used for supplying water to a rice field. Compare this with such irrigating equipment as exists in our western valleys. (Photo Ewing Galloway)

A comparison of the relative importance of fuel and water as sources of power might help to make this point clearer. Census Bureau statistics show that in manufacturing in 1919 in the United States 29,504,792 horse power was used. Data gathered by the United States Geological Survey puts the capacity of existing water plants in 1921 at 7,348,197 horse power. Using these somewhat imperfect data we find that fuel supplies approximately three times as much power as does water.

Of the several fuels now in use coal is probably the most important source of power. However, petroleum is assuming a place of increasing importance, especially if we include the power produced by the small units such as are used in automobiles, trucks, and motor boats.

Scientists and engineers have of late been giving much thought and time to considerations of the extent of our known power re-



serves. During the summer of 1924 there was held in London a World Conference on Power. Perhaps the most complete and accurate survey of world power sources ever made was one of the outstanding results of this conference. The accompanying map from the *Electrical World* embodies many of the more significant data. The total coal reserves as shown by this survey aggregate over 7000 billion metric tons (a metric ton being approximately equal to the short ton of this country). This is over 7000 times the estimated world production of coal in 1923. At the present rate of use this will be enough for some 4000 years.<sup>1</sup>

The Conference estimated the potential water power for the world at approximately 293,000,000 horse power. About one-tenth of this is now developed and in use. The *Scientific American* (December, 1924) points out that if all the power and heat in the world were supplied from water power instead of largely from coal and oil, as is now the case, we should need a water-power development of at least 200,000,000 horse power and possibly as much as 250,000,000 horse power. It is concluded that water power can never supply the power needs of the world, when the present needs would require the maximum development of potential water power. Charles P. Steinmetz, the great engineer, who was an ardent advocate of the fuller utilization of our water resources, also pointed out practically the same thing, basing his estimates on data quite similar to those above.

The warnings of Frederick R. Low, recent president of the American Society of Mechanical Engineers, George Otis Smith of the United States Geological Survey, and other men in this field should encourage some serious consideration of new power sources as well as the effort to eliminate the waste from our present methods of utilizing coal and other fuels.

There has been some effort made to utilize the energy of sunlight and the energy of the tides for supplying power for industrial

<sup>1</sup> According to the calculations of Mr. D. B. Rushmore, chief engineer, power and mining department of the General Electric Company, if our coal consumption were to continue to increase at apparently the normal rate of seven per cent each year, the life of our known reserve would be as follows:

Eastern District, which includes the most accessible and best quality of our fuel. . . . .	59 years.
Eastern, Central, and Southern Districts. . . . .	65 years.
Entire U. S. and Alaska, two-thirds of this being low-grade coals and lignites. . . . .	84 years.

purposes. However, they have advanced only to an experimental stage and have not yet proved themselves able to compete in the commercial field with steam, gas, or water power, but as potential sources of power we may well consider for a moment their possibilities. The data of Ericsson and Buchanan on the energy of the sun are significant. Ericsson in 1870 estimated the direct heat energy of the sun in 45 degrees latitude to be equivalent to about 13,000,000 horse power for a square mile. Buchanan in his work in Egypt in 1882 made estimates which would give 214,000,000 horse power per square mile.<sup>1</sup> Some schemes have been tried for utilizing the sun's rays as a source of energy. However, they have depended upon steam as an intermediary and so come more or less into competition with steam engines. It needs but little imagination, however, to realize the potential possibilities of such mechanisms in northern Africa or our own arid Southwest, where the sun shines perpetually. Further development will be dependent upon the increasing expense of other power sources as well as upon the perfection of cheaper mechanisms for the transmutation of sun-energy into power.

The utilization of the tides as a source of energy has long interested man in his search for a means of supplementing his own effort. The most successful tide power plants take advantage of the rising tide to store water in tanks or basins from which it is allowed to fall again upon water wheels or turbines. The following is a description of the tide plant of the Rockland Power Company at Rockland, Maine.<sup>2</sup>

"The plant consists of two basins, a high-water and a low-water one. Each basin has an area of one square mile and there is a tide of ten feet. From the high-water basin a 15-foot shaft extends vertically downward for 203 feet and then is connected by a horizontal tunnel to a 35-foot shaft extending upward to the low-water tank. At the top of the down-flow shaft there are 1500 half-inch air tubes, through which air is drawn into the water and carried to the bottom of the shaft. The air separates

<sup>1</sup> These figures become more significant when we realize that over 29½ million primary H. P. were utilized in American industrial plants during 1919. Using the estimate of Ericsson, 13,000,000 H. P. per square mile, we find it to be almost double the capacity of existing water wheels in the U. S. for 1921.

<sup>2</sup> Fernald, Robt. H., and Orrok, George A., *Engineering of Power Plants* (N. Y. 1921).



at the bottom and accumulates in an air chamber while the water flows up the larger shaft to the low-water tank. The air is under a head of water of 195 feet and is piped through a 14-inch pipe which joins a 30-inch main. This apparatus develops 5000 H. P. and has an efficiency of 75%." There is also a plant being installed at the mouth of the Severn River in England. The plan there is to utilize the 30-foot rise and fall in the daily tide by the building of a dam across the estuary of the river. Power will be generated by means of turbines set into the framework of the dam. It is estimated that enough power can be developed during a ten-hour day to run most of the mills of the manufacturing centers in this vicinity.

Another possible source of fuel for power is oil from oil-bearing shale. This extraction may prove feasible when the supply of petroleum from wells has materially diminished and prices have consequently stimulated the exploitation of new resources. Petroleum is, even at present, being extracted from shales in Scotland on a commercial scale; and there are enormous areas of these shales in the United States which may some day be drawn upon.

Also there is, of course, the possibility of utilizing to a greater extent the energy of moving air currents. The wind is one of the oldest sources of power; yet there has never been any very extensive utilization of it. Windmills have for several centuries, pumped water, ground grain, and performed other minor operations. The recent work of Herr Flettner of Germany in introducing his "rotor ship" has kindled a new interest in getting more power from the air. According to recent press dispatches, our own government is experimenting with the rotor towers on ships and even with their applicability to airplanes. Other investigations also are being conducted to develop improved types of air motors for utilizing wind energy in producing electric current. But whether we shall in the near future be obtaining much of our



The Flettner Rotor ship, which has kindled a new interest in wind power.  
(Photo Wide World)

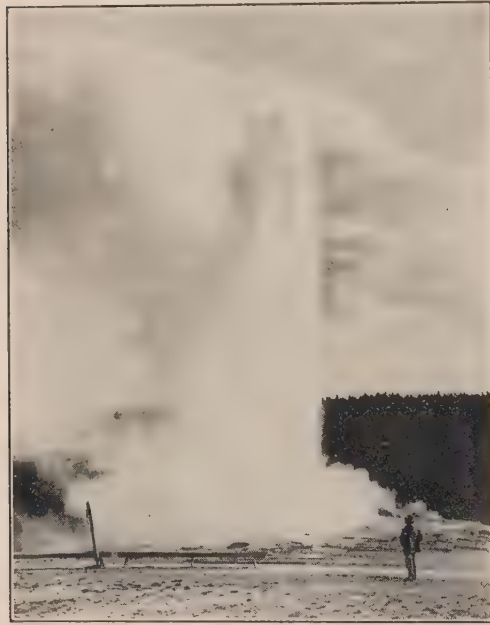
power from the "overhead power house" is a problem yet in the speculative stage.

Professor Haldane of the University of Cambridge sets forth some interesting speculations regarding future power sources in his interesting little book *Dædalus*. One of his suggestions is dependent upon the use of windmills for working motors which in turn supply current for the electrolytic decomposition of water into oxygen and hydrogen. These gases, it is suggested, may

be liquefied and stored in vacuum-jacketed reservoirs. In times of calm the stored gases would be utilized for driving internal engines, which, in turn, would supply electrical energy.

From external evidences such as volcanoes, geysers, and hot springs, it can quite definitely be assumed that below the earth's crust are regions of extreme heat. The higher temperatures in the deep shafts of the Utah and Montana copper mines are further evidence that such conditions of heat exist. Here should be

a great source of en-



Old Faithful Geyser, Yellowstone National Park. An external evidence of extreme heat below the surface of the earth—and immense unused sources of power! (Photo Ewing Galloway)

ergy if some practical method of transforming into usable power can be worked out. It would probably have to be in the nature of a deep bore, where water forced down would be sent back as steam<sup>1</sup> to be utilized in steam turbines and transformed into electricity. In California an interesting project

<sup>1</sup> This is, of course, what happens in a geyser.

utilizing the heat of the earth is already well developed. The particular region is one of numerous small geysers emitting mostly steam. Engineers have put down several borings, obtaining steam under sufficient pressure to run engines. There are many plans like this over the country; natural power houses may develop from some of them. However, like oil shale, tide, and solar power, this resource will have to await the time when the more available resources are depleted before extensive developments will take place.

The work of the physicist and chemist, during the last decade in particular, has opened new possibilities of power. Much speculation has followed upon the discovery of radium by the Curies. The physicist and the chemist now find themselves faced with countless new problems growing out of discoveries concerning the atom and its structure. Some of the scientists profess to see limitless stores of energy locked up within the small compass of the atom. Whether this atomic energy can ever be released in sufficient quantities to supply man's need for power is a highly speculative question—one upon which scientists are still unable to agree.

During some early period of the earth's history, long before man began to remember and record, the energy of the sun was being transformed by minute vegetable cells into vast jungles of trees and plants. Then came geographical revolutions when these dense forests were submerged and subjected to pressure and heat of varying degrees. And as a result of all this we are now able to extract from the earth coal and petroleum which have made possible this age of power. If we could but learn the secret of this vegetable cell which takes from the air the carbon necessary to build its structure, utilizing the sun's rays in some mysterious way as an aid, then we could, perhaps, feel ourselves far advanced toward a solution of our power problem. It would not be solved, however, until we had found a means of intensifying and accelerating this process of storing energy.

1900 2.7

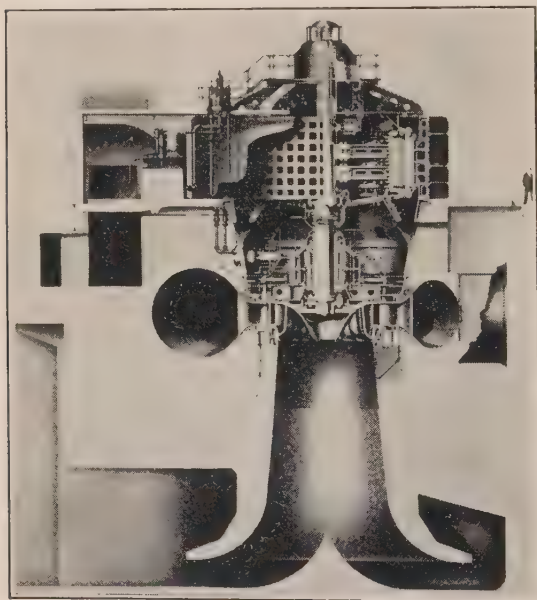
1923 30.9

Production of petroleum in billions of gallons, United States. Petroleum has become a most important source of power. (From U.S. Census Bureau statistics)

### 3. Mechanisms for the Application of Power

All the possible power resources in the world would be of relatively little avail to man without mechanisms to transform this energy into useful work. Water tumbled and hurried down from the hills and from the mountain peaks long before man devised the water wheel and harnessed it to his mill. But when the search began for power to apply to the new tools, natural forces were never a limiting factor.

How man has utilized raw materials, motive power of varying forms, and tools and machines to increase the quantity and variety of products and so better the quality of his life would make a story far too extensive to be covered in a single chapter. We



An "inside" view of a huge hydro-electric unit built by the Allis-Chalmers Company for the Niagara Falls Power Company. It has a rating of 70,000 H. P. Note man in upper right of picture. (Courtesy Allis-Chalmers Mfg. Co.)

can only touch on a few of the more outstanding mechanisms and processes by which man has supplemented his own energy.

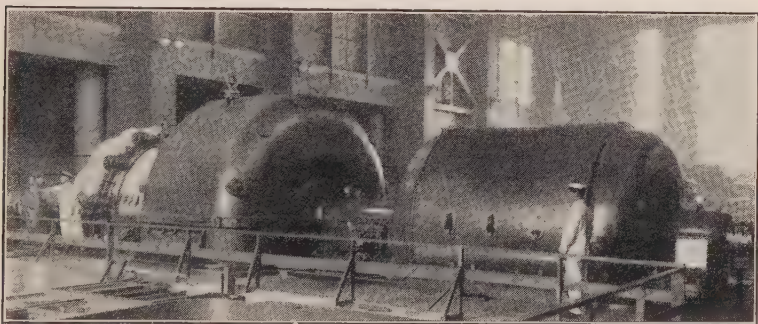
Of primary importance in such a consideration are those mechanisms which are directly responsible for the transformation of energy into work. These mechanisms we call motors. In a general sense these would have to include men, horses, and other animals since they are capable of transforming food

energy into work. We will here, however, limit ourselves to the consideration of such mechanical motors as heat engines including steam, gas, oil, hot-air, and solar engines; pressure engines



such as water wheels and water motors; windmills; and electric motors.

The oldest of these mechanisms in point of use, the water wheel and the windmill, have undergone relatively little change in principle. This is more especially true of the windmill. Instead of wood, metal is now the construction material of both water wheels and windmills. The development of the water turbine was, of course, a distinct advance. Some of the turbines such as those at Niagara Falls and Keokuk are capable of developing as much as 70,000 horse power. The turbines just mentioned



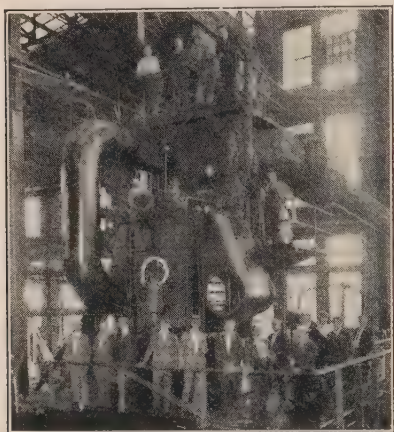
A steam turbine (on right) at the River Rouge plant of the Ford Motor Company.

are dependent upon large "heads" of water and operate at a low speed. There are many turbine plants, especially along the Pacific coast which are able to operate on small heads of water; but this is only possible where there is a higher fall and consequently a greater pressure. The turbine has a relatively high efficiency,—that is, it is capable of transforming a relatively large amount of the energy imparted to it into useful work. Some turbines are capable of delivering as much as ninety per cent of the original energy.

Most of our power at present is developed by fuel power motors utilizing coal, petroleum, and gas. Motors for this purpose are of two general types: those deriving their power from motion imparted to a piston and those which depend upon turning the blades of a wheel. In the first class are the steam engine and the internal combustion engine; and in the latter the steam turbine.

Relatively little more change has taken place in the development

of the piston engine since the time of Papin in 1690, Newcomen in 1705, and Watt in 1763, than has taken place in the development of mechanisms for utilizing wind and water. The improvements in the use of steam as a motive force have been primarily an effort to increase the efficiency of the piston engine itself. The outstanding exception to this is the invention of the steam turbine. The steam engine is known for its lack of efficiency in obtaining the largest amount of power from a given amount of fuel. Relatively few plants at present are capable of obtaining more than twenty



A new type of Diesel engine recently developed by the Worthington Corporation for either land or marine use. (Courtesy Worthington Pump & Machinery Corp.)

per cent of the potential energy from coal. A host of devices and schemes have been developed to overcome this weakness of the piston engine, such as improved types of boilers, water heaters, superheaters for steam, and automatic stokers. The automatic stoker is of double importance, first in saving the labor of men, and second in better utilizing the coal. It is worth noting here that the more efficient steam plants are those developing large amounts of power, probably over 100 H. P. It is in these large units that steam power surpasses gas power as a source

of energy. The steam-turbine type of engine was conceived long before it finally came into use. For large power units it is now replacing many of the older piston types of engine.

Engines using gas, oil, or gasoline are usually spoken of as internal combustion engines. The fuel, which must be in gaseous form as it enters the engine cylinder, is mixed with air in the proper proportions to form an explosive mixture. It is then compressed and ignited within the cylinder of the engine. The pressure resulting from the explosion again forces the movable piston into motion, thus transforming the energy of the fuel into work.

The internal combustion engine has had an important part

to play in the present industrial development. The tremendous growth of the automobile industry is in large part due to its invention and refinement. The advantage of the internal combustion engine over the steam power plant is primarily that of its availability in smaller units. In places where the needed power can be supplied with a small power unit of less than 100 H. P. the gas engine offers the best type of motor. The fuel sources are manifold and in many instances are waste products, such as blast-furnace gas, which, if it could be utilized in the production of steel, would eliminate the use of a considerable percentage of the coal now used. Being relatively smaller in size per given H. P. makes the gas engine advantageous for use in places where space is at a premium.

The Diesel engine is a particular illustration of this fact. The following table illustrates this point:

COMPARISON OF DIESEL AND STEAM ENGINES<sup>1</sup>

	Diesel	Steam
H. P. ....	21,000	21,000
Weight of engine and accessories. ....	1,000 T.	3,400 T.
Space required. ....	5,300 cu. m.	10,000 cu. m.
Daily consumption. ....	100 T.	360 T.
Consumption for voyage of 15 days. ....	1,500 T. <sup>2</sup>	5,400 T.
Bunker space for voyage of 15 days. ....	1,700 cu. m.	7,000 cu. m.
Total space required for engine and fuel. ....	7,000 cu. m.	17,000 cu. m.

The Diesel engine is being manufactured in commercially available types which develop as much as 500 B. H. P. per cylinder and some double action types are even able to develop 1000 H. P. per cylinder.

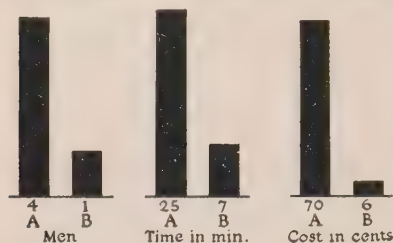
The importance of mechanisms for transforming fuel into power might be better appreciated if we consider their great advantage over man as a source of power. The following excerpt is a striking illustration:

"One of the serious objections to the use of man-energy for motive purposes lies in the impracticability of securing large amounts of power from even large groups of men. A little calculation will make this point clear: The power plant of a modern

<sup>1</sup> De la Tramerye, *The World Struggle for Oil*, p. 15.

<sup>2</sup> Heavy oil.

department store may contain, let us say, eight steam boilers with an aggregate capacity of some 4,000 H. P. To produce 5,000 H. P. by the use of men it would be necessary to employ 5,000 x 10 or 50,000 men who are supposed to drive the electric generators treadwheel fashion. Assigning a floor space of 2 ft. x. 4



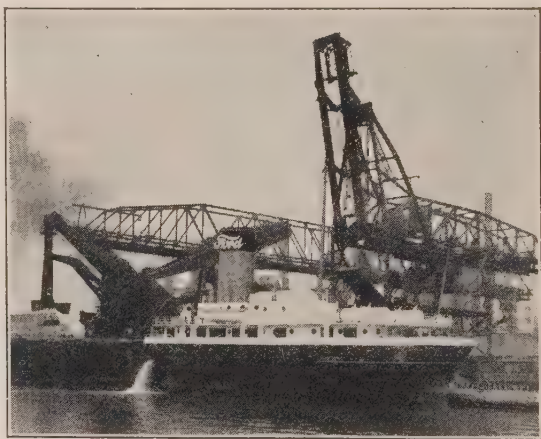
A comparison in number of men, time and money required, to handle five tons of ashes. A, by hand-shoveling; B, with use of portable conveyors. (Statistics from *Industry Illustrated*, N. Y.)

ft. to each man, these workers would require a total floor space of 50,000 x 8 or 400,000 sq. ft., which is about one-fifth of the total floor space in the Philadelphia store of John Wanamaker."<sup>1</sup>

Turbines developing 40,000 H. P. are not uncommon today. There is one at the Waterside Station of the New York Edison Company of this capacity. It is fifty-seven feet

long, twenty feet wide, fourteen feet high, and weighs 975,000 pounds. It would take 400,000 workmen to develop this amount of power, calculating that one man can produce one-tenth of a horse power.

Modern unloading equipment installed at the River Rouge plant of the Ford Motor Company is capable of unloading 600 tons of material per hour. The average lake boat is rated at from 10,000 to 12,000 tons; so it can be seen



An ore boat being unloaded at the River Rouge plant of the Ford Motor Company.

that by working continuously a boat could be unloaded each day.

<sup>1</sup> Greenfield, "Human Energy as a Motive Power," *Cassiers Magazine*, 1911.



In the early part of the nineteenth century a woman was able to spin twelve skeins of thread in ten hours; this would produce a thread somewhat more than ten miles in length. In the modern factory she can attend 600 to 800 spindles, each of which spins 5000 yards per day. If she happens to be tending 800 spindles this would be 4,000,000 yards or about 21,000 miles of thread per day. The saving effected here by power and machinery over hand processes is stupendous.

To attempt to classify work in the present industrial sense into all of its categories would be quite beyond the scope of the present discussion. But, in general, man's labor consists of lifting, pushing, pulling, or striking things. To this might be added many processes such as weaving, spinning, cutting, and forging. In industry at the present time, moving goods might mean a multitude of operations, from the handling of the various raw materials to the handling of the finished product. The development of mechanisms to supplement man's human labor in this task is very interesting. A glance through the advertising section of such journals as *Industrial Management* or *The Engineering News* is an interesting index of the importance of mechanisms for this purpose. These include cranes of various sorts, carriers and elevators for handling all types of raw and finished materials, pneumatic devices for handling the same materials, and pumps and piping systems for handling liquids. If each large industry had been dependent upon man-labor for lifting and transporting the various products in the course of manufacturing, the present stage of development certainly never could have been reached. For instance, the success of the Ford plant in the manufacture of automobiles in the great quantities it produces results from the utilization of these mechanisms mentioned above.

In the field of cutting, drilling, and boring the advancement has been no less marked than in the field just considered. Saws set with diamond chips, or made of special steel alloys, are used in quarries and have eliminated slow, tedious hand processes.

In steel plants, steel bars and plates are cut or sheared with as little effort as we use to cut cardboard. Power drills are used in constructing the small precision instruments for the laboratory or in boring the parts of the huge machines now used in mills and

mines. Trip hammers are constructed with the control so accurate that they can strike blows of several hundred pounds or ones so regulated that they would not break an egg placed on the anvil.

The processes of manufacture which a large proportion of the articles of everyday use pass through, have become so involved that it would require a separate book to describe them in detail. The processing of cotton, for example, involves first of all the ginning which separates the seed from the fiber. After the cotton reaches the factory it passes through a complex system of cleaning and carding. The

fiber is then ready for spinning. Before the spinning process can start, the fiber must be straightened out and reduced to a continuous strand. After the thread is spun, there comes the process of weaving, dyeing, and finishing before the finished cloth is ready for the store counter. The process is, however, nowhere so simple as is indicated in this short discussion.



A power-driven trip hammer in a steel mill. The contrast between this new kind of blacksmithing and that done "under the spreading chestnut tree" furnishes an epitome of the effect of industrial development on American life. We probably like the village smithy better—but it could never do the work we require to be done. (Photo Hine)

The introduction of labor-saving machines has played an important part in making cotton manufacturing as important as it is.<sup>1</sup> The shoes we wear, the watches we carry, and the books we read are all products of complex mechanized industries.

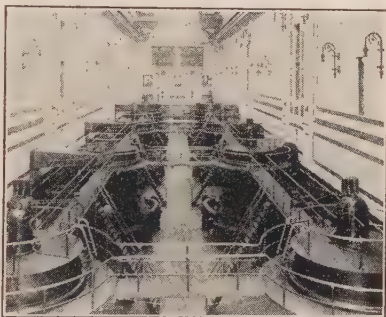
<sup>1</sup>In 1805 the census figures show that there were 4500 spindles in the country; by 1831 the number of spindles had increased to 1,200,000, using 77,800,000 pounds of cotton. There were in 1924 more than 37,000,000 active spindles in the United States.

#### 4. *Electricity*

The importance of electricity in the present industrial system as a supplement to human power is worthy of special mention. It offers a convenient method for transmitting power over long distances. This makes possible the utilization of water power at some distance from its actual source. Further, it makes possible the placing of this power where the need for it is greatest—usually near sources of other raw materials. It is also a type of power which can be handled easily and divided into small units. This supplies the needs of many types of manufacturing where many small power units are required rather than one large unit. By using electricity, power can be supplied to small individual motors directly attached to the machine rather than by complicated transmission systems.

Electricity may be the product of any of the several sources of power already mentioned. These, coupled to a dynamo, produce the current, which may be carried over wires to the places where it is to be used. In the past electric plants have all been more or less isolated and constructed with no relation to any other than the section immediately about them.

There is, however, a growing interest in schemes for the integration of the electric power systems of this country into what are frequently spoken of as "super-power systems." Secretary Hoover has described "super-power" as "interconnections and the relay of excess current with the full development of water power." This is essentially an operating description. And another scheme for unifying the electric power plants of the country has been advocated recently, which is usually called "giant power." It is said by the advocates of giant power that super-power is too limited in its scope to include all the possible relationships which cheap and



A view of the interior of the Waterside Station of the New York Edison Company. The inventor of the first wheel and even the inventor of the first electrical appliance would stand aghast at their development since. Sometimes one wishes they might see such an interior as this.

widely distributed power may have to advancing civilization. They have called their system "giant power" to distinguish its social significance from the mere business connotation of the term "super-power." However, it is not our purpose to discuss the merits of these systems but to mention them here as steps forward in bettering the power situation in this country. Super-power gained in importance during the war when there was need for the best use of all power resources. It consisted, for example, in interconnecting the central power plants of Pennsylvania so that the excess power of one plant could be sent into the adjoining district in case of need there. The recent super-power survey conducted by the United States Geological Survey covers quite fully the possibilities of super-power along the Atlantic Coast from Boston south to Washington, D. C. Recently the power companies of the industrial areas of the Southeast have been endeavoring to install a super-power system there. The giant power scheme could perhaps be best set forth by quoting the following seven tentative objectives as set forth by Morris L. Cooke, Director of the Giant Power Survey of Pennsylvania:

1. Large stations of not less than 650,000 H. P., stations of the size recently announced by the Philadelphia Electric Company and by the Commonwealth Edison Company of Chicago.

2. These stations shall be at or near the mines when power is developed from coal.

3. Current shall be fed into a trunk line transmission system reaching 220,000 volts, a line capacity such as they have in California but of which there are none in the eastern part of the country.<sup>1</sup>

4. By-product recovery shall be practiced. In Pennsylvania we are burning 44,000,000 tons of coal a year for power purposes alone, and so far as we know, none of that coal is processed for the recovery of by-products.

5. Integration of companies so as to develop an integrated system, though not necessarily one single company.

6. Railroad electrification.

7. Power to the small user (particularly the farmer).

The giant power plan might be likened to our plans of national highways extending as main thoroughfares across the continent. The advocates of giant power eventually would extend major

<sup>1</sup> One has since been announced, according to newspapers, by the Pennsylvania Power and Light Company to run eastward out of Sunbury, Pennsylvania.



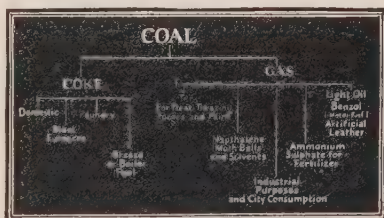
power lines across the continent. This, however, would follow the need for power. For the present, their plan would cover the industrial areas of the East; power would be generated in the coal fields of Pennsylvania and supplemented by available water power. As the traffic from the less used roads is contributed to the traffic along our main highway, so would each generating plant along the major line contribute to the total available power. Those who needed the power would receive it transformed into a current of proper voltage. Just what the future of electric power in this country may be it is hard to foretell. According to the census report of 1920, "Out of a population of 33,187,532 in the Atlantic, East S. Central and West S. Central states, some 22,720,527 people live where they cannot get electricity from any source at any price."

The utilization of coal at the mines for the manufacture of electric current would effect a great saving in the by-products which are contained in the coal, but for financial reasons and because of the inertia of custom, it will probably be some time before we get a scheme such as the Giant Power plan.

One of the important considerations in the use of electricity as a source of power is the problem of transmission. The art of long-distance transmission had

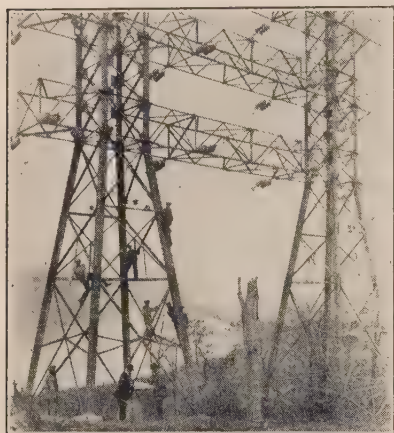
its start about thirty years ago; then a line eighteen miles long operating at 11,000 volts was a distinct advance. Today along the Pacific coast there is a net work of lines 1200 miles long operating at 165,000 volts. Wireless transmission of power also may be only a dream for the distant future but it begins to assume practical aspects. Laboratory experiments recently carried out show it to be possible, at least over short distances. When we realize the short period of time which has elapsed since wireless telephony first made its appearance, we should be rather hesitant about doubting the possibilities of eventual wireless transmission of power.

Electricity has become a servant of many other uses than those of turning the wheels of our factories, propelling ships over stormy



This chart shows the by-products derived from coal at the River Rouge plant of the Ford Motor Company.

seas, or pulling long trains over mountain passes. It lights our homes and streets, furnishes heat and light for industrial plants, provides motive power for rapid transit, and permits long-distance communication. Until comparatively recent times little electric current has been used for supplying heat. There is an increased use of it, however, in industrial plants for all manner of operations



Steel towers supporting high-tension lines for the transmission of electrical energy. (Photo Hine)

from baking bread and melting glue to the enameling of automobile bodies. The initial cost is still high, but its economy and convenience tend to offset that. Experts of the Westinghouse Electric and Manufacturing Company consider it to be only a matter of time until the heating of houses by electricity will become practicable.

Electric lighting has come to have enhanced importance in industrial processes as lighting engineering has progressed. Better lighting in a plant definitely assures more efficient operation: and lighting engineers are keeping abreast of progress in other branches of the electrical industry and are producing many interesting innovations.

There is hardly any section of the industrial system which has not been materially affected by the application of electricity to some of its processes—power, heat, transportation, light, and control. And it is most interesting to note that many of these developments are more or less in their infancy; so that perhaps we may see startling progress in the coming decade.

### 5. *Special Outstanding Processes*

Out of the multitude of contributions which the sciences of chemistry and physics have contributed to the advancement of the industrial arts, there are a few which warrant our special consideration. The development of special steels and alloys, from

which high-speed tools have been made, paved the way for a tremendous development of the art of steel-making and the use of the lathe. Steel alloys of vanadium, nickel, tungsten, and chromium, as well as other elements, produced valuable materials for the construction of articles needed in the production of ball and roller bearings, axles, and the countless other industrial mechanisms requiring toughness, ability to withstand vibration, hardness, etc. The use of the electric arc and the combination of hydrogen and acetylene for cutting and welding has been of immeasurable importance. The welding of unlike materials presented to the blacksmith an almost insurmountable problem which has been overcome by the new uses of the intense heat of the electric arc and the oxy-hydrogen flame. No steel girder or steel plate can withstand the man equipped with an oxy-acetylene blow torch.

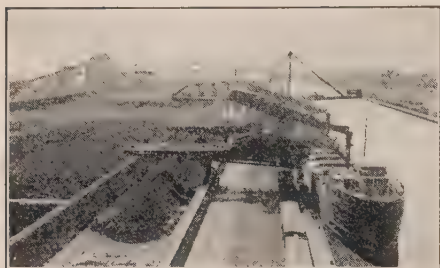


Welding with the electric arc. (Photo Hine)

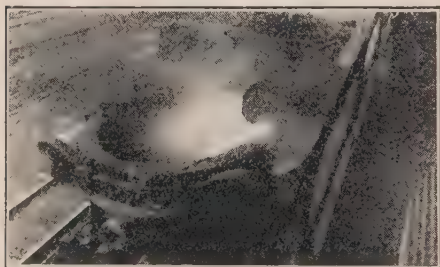
Processes for producing extreme cold are just coming into increased commercial use. These processes as a means of maintaining low temperatures in storehouses to preserve foodstuffs, furs, and other materials, are more or less familiar to all of us. These processes are finding many other uses, however, such as the separation of gases. Oxygen for use in the acetylene blow torches, nitrogen for use in light bulbs, and the like are produced in this way.

As means of destruction, explosives have had a comparatively long career; but it is only in more recent times that we have begun to use explosives for the advancement of the industrial arts. Coal is shattered from the vein, drainage canals are excavated in the Everglades of Florida, and mountain-sides are blown off for the building of railroads, by the use of this new source of power. The handbooks of the explosive manufacturing concerns are interesting compendiums of the possible uses of this new ally of man.

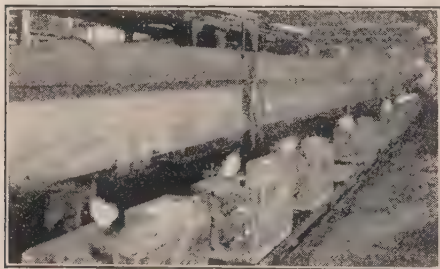
For many centuries man has constructed his homes and public buildings of rock, but only by the spending of enormous amounts

THE PRODUCTION CYCLE AT RIVER ROUGE<sup>1</sup>

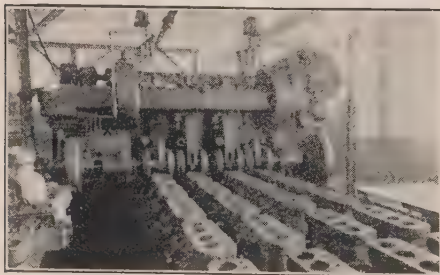
Monday, 8 A.M.: After a trip of approximately 48 hours from Marquette the ore boat docks at the River Rouge plant. Hulett unloaders start removing the cargo, which is transferred to the High Line, and from there to the skip car which charges the blast furnace. By continuous process this takes 10 minutes.



Tuesday, 12:10 A.M.: Sixteen hours later the ore has been reduced to foundry iron. It is then cast into pigs and sent to the foundry, where, mixed with certain proportions of scrap, it is remelted. This takes about four hours in all. Blast-furnace metal is also cast direct, in which case four hours are saved.



Tuesday, 4:10 P.M.: As the conveyor brings the molds past the pouring station the hot metal is cast into cylinder blocks. These then go to the shake-out station and are taken away to cool and be cleaned. The cooling and cleaning process requires several hours.



Tuesday, 12:20 P.M.: The casting now goes to its first machining operation. There are 58 operations in all, all of which are done in approximately 55 minutes. All these are performed in the foundry building—a departure from conventional foundry practice, but in line with the Ford method of continuous operation.

<sup>1</sup> Courtesy Ford Motor Co.

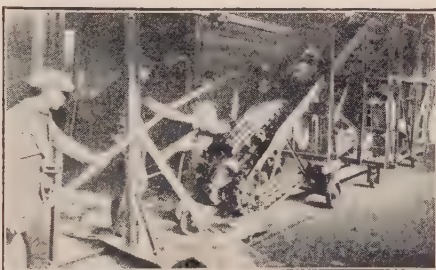


## THE PRODUCTION CYCLE AT RIVER ROUGE

Tuesday, 1:15 P.M.: About 3:30 the motor block is ready for the assembly line. Ford mechanics have reduced the time required for motor assembly to an average of 97 minutes. This includes everything, even an electrically controlled block test. Except for "burning in" the motor to loosen it up, everything is done "on the move."



Tuesday, 3:00 P.M.: The finished motor coming out over a trunk-line conveyor is loaded into a freight car with the aid of the device illustrated and shipped to a branch for assembly into a finished car. A constant stream of freight cars leaves the plant day and night.



Wednesday, 8 A.M.: Arriving at the branch plant, the motor is unloaded and sent to its station on the final assembly line. These assembly lines are standardized the world over and represent specialized workmanship at the peak of efficiency. In a little more than an hour the car is ready to be driven away.



Wednesday, 12 noon: Long before noon, the dealer will have received the car and paid for it. Often he brings his customer to the plant to close the deal, converting raw material to cash in 33 hours. Shipping and handling take 15 hours. Even this record is often shortened, for if the Detroit branch makes the assembly the shipping time is saved.



of time to cut and transport it over great distances. No one knows the amount of human life used in the construction of the Pyramids. As we contemplate some of the marvelous old-world structures it seems impossible to us that they could have been built with the human being as the primary source of power. We are still using rock from its various sources for our homes and public buildings, primarily because of the beauty which this material adds to the structure but also because of certain definite other characteristics.

1890 8 ■

1923 137 ■

Production of cement in millions of barrels, United States. (From U.S. Census Bureau statistics)

But we no longer use human powers wastefully as did the ancients. A new factor in the art of construction entered with the invention of concrete. Concrete no less

than steel has revolutionized our whole conception of building construction. It is a material which lends itself to varied shapes and forms. It can be semi-liquefied, thereby making possible forms which would involve enormous expense and effort if stone from the quarry had to be cut and fitted. It has also given us a substitute for stone which is capable of supplying the needs of sections of the country quite devoid of any form of building stone. It has a multitude of uses, from foundations to floors and sidewalks; and from roofs to framework, girders, and columns. As a material for the making of structures which will be exposed to water, it is not surpassed by any other building material. The use of concrete was one of the most important factors in making possible the construction of the Panama Canal. It very generally supplants stone as a building material, and because it is fireproof and waterproof it is far superior to lumber for most purposes. Its low tensile strength can be rectified by the use of steel beams and wire imbedded in the concrete for reënforcing. An interesting use of cement is in the form called gunnite. This is a liquid cement mixture which may be sprayed over wooden buildings as a protective cover. It may also be used as a spray in mines to cover rock surfaces and so eliminate to a large extent the crumbling and disintegration of the rock walls.

These few processes mentioned above by no means exhaust the field but are merely examples of some of the more outstanding developments contributing to a new day in industry.<sup>1</sup>

<sup>1</sup> The student wishing further reading along this line will find much in the

## 6. *Industrial Research*

In the discussion at the first of this chapter we pointed out how, by more or less haphazard methods, the factors which had contributed so materially to our present civilization, were discovered.

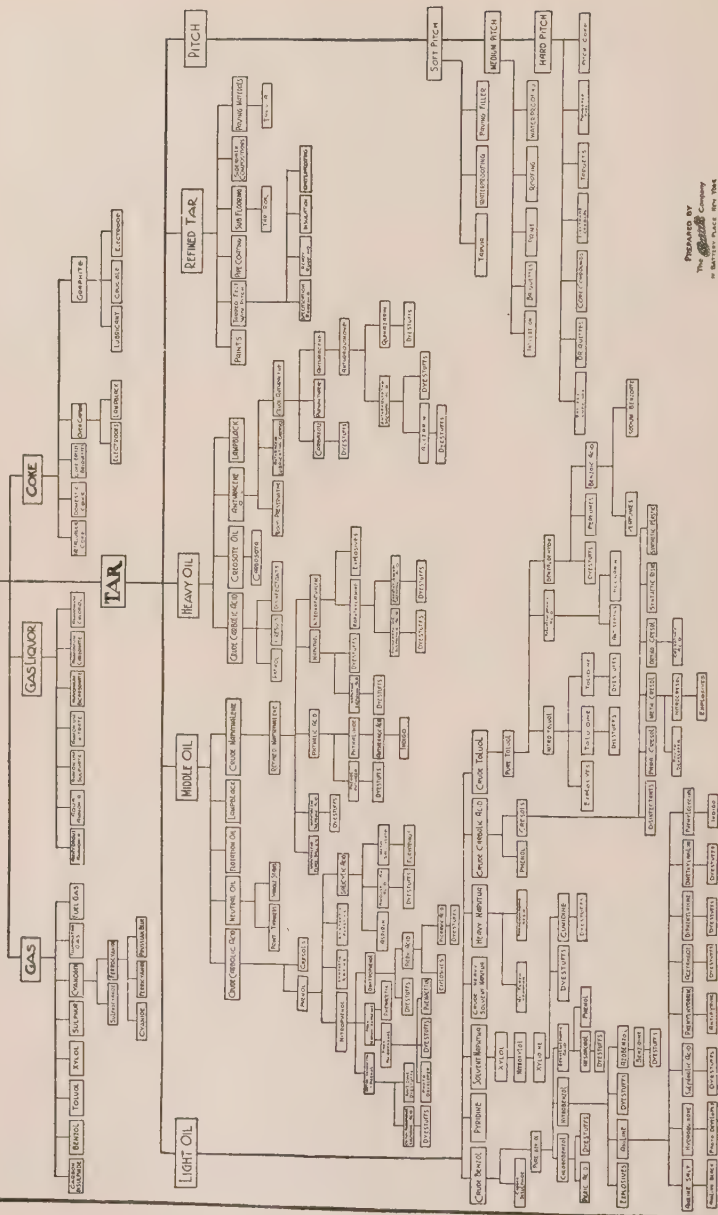
At first it was primarily a matter of the combination and manipulation of these more or less fundamental elements. Later there developed a definite effort to classify the important principles which had grown out of this earlier experimentation. These classifications and generalizations later became known as science. After the Industrial Revolution the more important developments grew out of the application of the sciences of chemistry, physics, thermo-dynamics, hydraulics, and mechanics. It is not at all probable that our major inventions could have been made without the aid of these sciences. In any attempt to push urban production to higher levels, we still continue to be largely dependent upon the application of their principles.

Industry itself is fast recognizing the importance of scientific research. Industrial research consists primarily of a systematic search for the solutions of certain definite problems. The growth of radio telegraphy and telephony is perhaps one of the best examples of what comes about when problems are attacked in this way.

Manufacturing concerns have not been slow to apply scientific knowledge and methods of analysis to their problems of production. In fact, most large concerns, such as the Eastman Kodak Company, the Western Electric Company, the sugar companies, and the United States Steel Corporation, maintain large and efficient research departments. They maintain on their research staffs some of the best chemists and physicists in the country. Their laboratories are supplied with all the latest and most efficient apparatus. In fact many of the recent great discoveries have come from commercial laboratories. An interesting example of this is the work of the General Electric staff in evolving a commercial process for the production of fused quartzite at a low cost. Just what the full possibilities for fused quartzite are will depend on

current issues of the engineering journals, such as: *The Engineering News-Record* (New York), *The Industrial Engineer* (New York), *The Electrical World* (New York), *Concrete* (Detroit), *The Explosives Engineer* (Wilmington, Del.), *Industry Illustrated* (New York).

## COAL



PREPARED BY  
The *Graphic* Company  
BATTERY PLACE NEW YORK  
COPYRIGHT 1913  
DUNN

This chart shows in a somewhat more detailed way what the research chemist has been able to extract from coal—compounds capable of yielding among other things medicines, flavoring materials, perfumes and dyes. (Copyright, T. J. Donnell Company.)



time. Since the published reports of the demonstration at the Lynn General Electric plant, physicists, electro-chemists, astronomers and specialists in other fields have speculated upon the uses to which it may be put. The list is interesting and includes such uses as manipulating the ultra-violet ray for the treatment of disease,<sup>1</sup> constructing windows in solariums, helping in the purification of water, improving scientific apparatus requiring heat-resisting glass and glass having the light-manipulating qualities of fused quartz.

Many of the improvements in the transmission of voice by wireless methods have been developed in these same laboratories. It is interesting to note how even the smaller concerns are installing research laboratories wherever it is at all practicable, or are availing themselves of such commercial establishments as that of Arthur D. Little of Boston. The universities of the country present even a better opportunity for the small manufacturer who is unable to maintain a research department and staff to which to submit his problems. In many cases a manufacturing firm, or even an association of firms, establishes a research fund in some university. The proper authorities of the university usually select the individual or individuals who are to carry out this work. In most cases the firm or group receives the right to utilize for a given period of years any definite results which may accrue from this research. This has been especially fruitful in the food industries and also in industries such as the manufacturing of soap and pottery.

Our government maintains the most important and largest research projects in this country and perhaps in the world. The



A member of the staff in a commercial research laboratory. (Photo Hine)

<sup>1</sup> It is notable that the recent work of cancer research specialists has been carried on by microscopic photography through fused quartzite to admit the ultra-violet rays.

Department of Agriculture, for example, is constantly involved in the solution of agricultural problems which necessitate the co-operative effort of chemists, physicists, bacteriologists, and indeed men from all of the scientific fields. The Department's work ranges all the way from the study of the proper food for man and animal to the best methods for the extermination of such enemies to crops as the boll weevil and the corn borer. Practically all of the other Government departments also carry on certain definite types of research work. The importance of this research work to the citizens of this country and other countries is incalculable. The unique feature of it all is that the results, if they be definite, are freely made available to all.

The magnitude of the present accomplishments in the field of science and invention today is such as to overwhelm us and yet were we to see listed the problems which the research scientist is working out or thinking in terms of, we would be even more astounded. Some especially are of the utmost importance to this generation; others would, no doubt, seem to the layman very unimportant and farfetched, but we must keep in mind that the great developments of one age to a large extent rest on the apparently unimportant discoveries of some past time.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What has power to do with man's economic life? Illustrate.
2. Suggest some of the ways in which electricity has accelerated industrial growth. Will the proposals of the exponents of "Giant Power" be of any value in raising the levels of production?
3. Is there any relationship between urban production and rural production? Illustrate.
4. What is the place of industrial research in modern industry? Explain.
5. Show how science, by substituting machine for hand labor in handling heavy and bulky articles, has contributed to the economic welfare of man.
6. What is the relationship between power, machinery, and large cities?
7. Are all industries equally responsive to the influence of labor-saving devices and the application of power? Fortify your answer by illustrations.

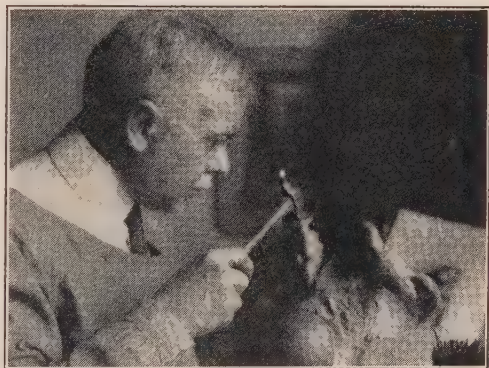
## CHAPTER 11

### INCREASING URBAN PRODUCTION BY MORE EFFECTIVELY USING HUMAN ENERGY

#### 1. *The Failure of Slave-Driving*

Without too violently stretching the facts we may say that since the beginning of time men must have engaged in their various productive activities for two reasons: first because they were driven to work by necessity (or by a master if they were slaves), and second, because man is the kind of animal he is—naturally active and actually unhappy unless he has something

to do. The economic organization of medievalism and even of the early years of the industrial era developed systems of slavery or serfdom in which men were literally driven to perform hateful activities by masters who profited hugely by their toil. But ultimately the very growth of the surpluses which were



The silversmith. (Photo Hine)

the product of the industrial system built up institutions in the community which were the enemies of slavery—such, for instance, as education. And the general effect of the world's growing prosperity was the raised standards of living that were so prominent a feature of the last half of the nineteenth century everywhere. And even though the rises in standards were not shared alike by all classes, the standards of all classes were somewhat raised. And a prosperous people will not long remain content with slavery or semislavery.

There were more reasons than one why slave-driving failed utterly. Among the more important of them, however, we can see, was the fact that slaves became more successful in resisting their masters; in addition there were the effects of the growth of democracy and humanitarian ideals. Also it soon became apparent that slave-driving was hopelessly failing to secure human effort.

As people came to have more leisure and to have access to more generous quantities of goods, they became far more effective in organizing and in resisting the power of those who formerly had driven them to work. As a result of this whole movement toward the organization of the workers and resistance to compulsion there was a notable movement to so re-create industry that workers need not to be driven to their tasks but might find in industrial activities an outlet for their natural propensities for constructive activity.

## 2. *Voluntary Productivity*

It is this natural tendency of human beings to be active that will remain as a dependence for the motivating of productive activities when slave-driving has finally failed and has completely disappeared. But it cannot be expected that this voluntary motive to industrial effort can be made to function effectively so long as there remain factories which resemble nothing so much as prisons, and gloomy ones at that, and in which the activities that are carried on are of a nature so monotonous, so wearing, and on the whole so dismal and so degrading to the human mechanism that there exists a constant tendency toward more or less active revolt. So long as we have remaining in our industrial system institutions of this kind, there will continue to be no other way of securing human effort except by driving men to their work; but as organization proceeds, and as the ideals of industrial civilization become more and more concrete and present themselves in clearer form to the minds of executives and workmen alike, the old type of industrial environment as well as the old type of slave-driving incentive to work, seem more and more clearly to be survivals of a barbaric past that cannot long continue in the civilized world.

We are coming gradually to the point where we can see that



in order to survive, industry not only will have to make the most effective use of the natural resources upon which it depends and of the executive ability of its managers, but also will have to discover the most effective ways of inducing voluntary endeavor amongst the rank and file of its workers. And when we study industry from this point of view we come inevitably to see that industry, in order to function effectively, will have to have its institutions so devised that men will function through them without that constant conscious withholding of effort that has been, of recent years, perhaps the greatest enemy of industrial progress, threatening to subtract from the product of industry more than can be added by constant technical advance, rapid as that has been and still is.



The woodcarver. (Photo Hine)

And not only for technological reasons have we come to see that industry must be reorganized to take advantage of the creative elements of human nature instead of depending upon the driving power of fear, but also because there has been a growth of democratic and humanitarian idealism amongst all the peoples of the world that must always be implacably the enemy of slave-driving in industry. Long ago democracy won a decisive victory in the struggle with political autocracy. The fundamental inconsistency of our well diffused political democracy with the tenaciously surviving hold of industrial autocracy is becoming clearer and clearer to the minds of men everywhere. The two cannot continue as institutions of the same community.

### *3. The Conditions of Proper Human Functioning in Industry*

If we are willing to admit, then, that modern effort must be secured, for these reasons, by proceeding through the stimulation of voluntary rather than involuntary endeavor, we are in a

position to examine the groundwork for the reorganization of industry that must take place to bring about this result.<sup>1</sup> When we examine these suggested fundamentals we find them usually to be something like the following:

1. That workers must find some satisfaction in their work.
2. That they must feel their reward to be the direct result of and in an understandable ratio to effort expended.
3. That they must feel themselves identified with the productive group of which they are a part by understanding it, by having emotional ties to it, and by sharing the responsibility for its control.
4. That they must feel secure in the tenure of their work as well as in the income from it.
5. That they must be given social approval for their productive efforts.
6. That their health must be safeguarded not only against occupational hazards but against premature exhaustion and old age.

#### *4. Satisfaction in Work*

When we say that workers must find some satisfaction in their work we are perhaps stating the most elementary principle involved in this whole matter; and it must be clear that we do not mean the satisfaction there is in receiving pay. There must be a kind of joy in the very doing of the work itself, such feeling for the craftsmanship of the work as the medieval guildsman had. Indeed, this contrast between medieval craftsmen and modern workers brings out some of the conditions inherent in the very nature of modern industry that make it so difficult to see how it can be so reorganized as to bring the old enthusiasm back into it. The medieval craftsman made the whole of a thing himself. If it were a pair of shoes or a suit of armor, the work that was done was all his own. Whatever praise there might be for good workmanship came to him; and the result of a lifetime of continuous effort in the making of shoes or the making of armor was the reputation in the community of a good shoemaker or a good armorer. This reputation was a very precious possession.

There are a number of reasons why this kind of satisfaction,

<sup>1</sup> The proper placing of men in going industrial organizations is not discussed here, but later on under the heading of "Personnel Management."

which may be supposed to have been the chief one in the life of the medieval worker, cannot possibly be had by the modern workman. In the first place, he does not make the whole of anything. So that when a completed ship sails down the harbor,



A craftsman—constructing a stained-glass window. (Photo Hine)

or when a pair of shoes finds its way into the hands of the consumer, the people who use the ship or who wear the shoes cannot attribute their good qualities to any one worker. They can neither curse him nor bless him. The old individual pride of product has disappeared, and it is not possible that the community in general or even his family, whom the worker holds most dear and whose

opinion he values most highly, shall give him any great credit for his productive efforts. On the contrary, his family and his neighbors probably know very little about his work as a producer. These are difficulties which must be faced. But, it has been suggested, it may be possible to substitute for individual pride in product a kind of collective pride which makes a man say: "That ship I helped to make—along with a good many other people, perhaps; but my work was as important as any one else's in it." So possibly



The new and the old. The larger picture shows a boiler room in one of the Ford plants equipped with latest stoking devices. Relics of bygone days, as far as this plant is concerned, are shown at the lower right of the picture. (Courtesy Ford Motor Co.)

a genuine *esprit de corps* may be engendered amongst a group of workers if other conditions happen to be favorable.

It might be possible, and of course would be highly desirable, if somehow praise could be awarded to workers for their productive efforts as it once was. This is, of course, extremely difficult, since the home has become separated so completely from the place of work and since husband and wife are no longer partners in the productive enterprise. But it may still be possible, by some device, to reward men and to praise them for their productive efforts. What is perhaps more possible still is that the modern place of work may become the kind of place where a worker would rather



spend the hours of his normally active day than to spend them in any other place; and that the kind of activities that are carried on there may be made the kind of activities in which he would rather engage than any others he could think of. Indeed, the very best type of modern factory is becoming just that sort of place, not a prison into which men have to be driven in the morning and from which they escape at night as rapidly as possible; but a genuine place for creative activity to which they go eagerly and which they leave reluctantly. This is the feeling of the chemist for his laboratory; of the writer for his study; of the physician for his hospital.

It would not, of course, be truthful to say that there are many such industrial establishments as yet in the world, nor, considering the history of the industrial system, would it be likely that there would be many; but one who observes industrial life with understanding may see examples of just this kind of thing—obscure examples perhaps, but of the nature of those insignificant phenomena of the present which are the germinal beginnings of the future.

In a highly socialized industrial system, however, where the standard of living of the worker and of his family is dependent upon the money income that is received as a result of his productive efforts, it perhaps never will be enough simply to make the place of work a pleasant one in which to carry on the normal creative activities of life. There always will have to be furnished to the worker an income sufficient to maintain him and his family in comfort and so at peace with the world. Payment for work will, therefore, always have to be sufficient to maintain what we have in another chapter discussed as the comfort standard of life.<sup>1</sup>

### 5. *Reward as a Direct Result of Effort*

But, if it is necessary to reward the effort of producers with a sufficiently high income for the maintenance of a certain standard of life, it also seems necessary to make certain that that reward is a direct result of and somehow bears an understandable relationship to the effort that is expended. It is hard to believe that it ever will suffice that a worker takes pride in the product of his work, that he has a certain creative joy in the doing of it, and that he has a cer-

<sup>1</sup> Chapter 4, above.

tain confidence in the maintenance of the standard of life of his family. It, perhaps, also will be necessary that the reward he receives shall somehow be a greater one because of special effort or special intelligence on his part; and this is, on the whole, because we must see that, although unquestionably industrial society has overvalued the incentive-power of wages to persuade men to work, there were involved in the first idea of the payment of wages, conceptions of human nature which were sound.

These centered about the idea that there needs to be an inescapable connection between productivity and reward. It was a mistake, of course, to make wages the sole reward; and it was a still greater mistake to concentrate on wages as the agency of the fear-incentive that was then depended upon. For, by the time the industrial system had developed, men were not driven to work by whips; they were driven to work by the fear of want; the fear of starvation for their children; the fear of a pitilessly advancing old age. But these were fears nearly as vivid as the fear of a slave-driver's whip.

And so wage payment, which had in it the possibility of freedom and of the advantages of genuine reward for effort, was made the tool of the slave-driving employer. But it need not continue to be that if it is improved by a supplementary reward for productivity which will assist in bringing out its possible effectiveness. It must not be haphazard, however, and it must not be a flat rate. If it is either of these it misses the essential possibilities that are involved. If it is to be a genuine incentive to industrial endeavor it must come as a direct result of effort and must be in a direct ratio to that effort. Also, it must always be understood that between effort and the wage reward there will continue to be this relationship.

#### *6. Identification with the Producing Group*

We have already indicated that another essential for the calling out of the worker's best efforts is the identification of the worker with the productive group to which he belongs; and this again is one of the most difficult ideals to realize in modern industry. This is because industrial organization has taken place, not in response to the needs of the operating personnel for efficiency in production, but as a function of the financing and profit-making activities of

business. So far, most industries have been organized and run not to make goods but to make money, and where making money has meant the stoppage of making goods, there has been no hesitation on the part of the managers to interrupt production.<sup>1</sup> Any such interruption of operations in the productive organization must, of course, throw the whole highly organized machinery for producing out of gear. A plant which stops, disbands its workers and loses their experience, their loyalty, and whatever efficiency there may have been in their collective adjustment to each other. When a plant that has been stopped resumes work it must re-create this whole difficult *esprit de corps* and find again the delicate adjustment of functions one to another. This is always a heartbreaking period for the executives responsible for production and one which they undergo only with the greatest reluctance.

It is the executive, responsible for organization, and the engineer, whose function it is to keep the machinery of industry running smoothly, who are in the best position to see that the worker must feel himself completely identified with the productive group to which he belongs in order to function with any enthusiasm at all for the collective product that is being turned out. Interruptions of operations for purely business reasons are the great enemy of this feeling of identity and individual responsibility to the group. But the operating personnel is helpless.

The industry was planned and organized, as we have said, for business purposes—perhaps to divide the market and control sales for the purpose of raising prices to consumers; perhaps for the

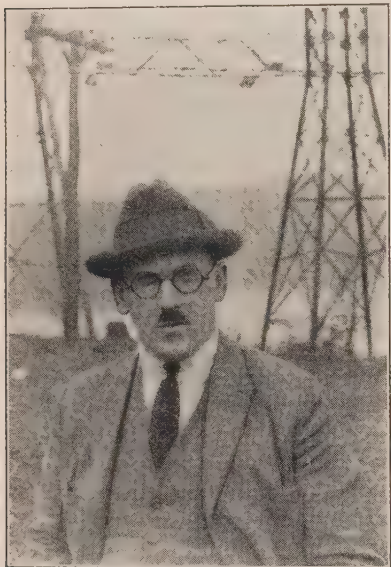


A view in the cafeteria operated by Swift and Company for their employees. Many experiments of this kind are being carried out in an attempt to bring about better relations between employers and employees. (Courtesy Swift & Co.)

<sup>1</sup> Cf. W. C. Mitchell, "Making Goods and Making Money," *Proceedings of the American Society of Mechanical Engineers*, December, 1922. See also discussion in Chapter 12 of this same matter.

purpose of combining to run competitors out of business; or perhaps for the purpose of making a profit out of the stock sales involved in combination—and none of these have anything to do with the operation of the industry. As a matter of fact business men sometimes build up curious industrial institutions entirely irrelevant to the requirements of operating efficiency; so that those who are in charge of operation, and much more of course, the workers who are the rank and file of the operating personnel, fail

to feel an identity of interests with all those other individuals with whom they have been brought into a single organization for purposes not of producing goods but of making money. When this occurs it is quite impossible to build up throughout a business structure that *esprit de corps* which is so necessary if men are to be persuaded to function efficiently in the production of goods. It seems necessary to subordinate purely business considerations to operating criteria; in other words, to make the engineer supreme.



The engineer—interested most in smooth and continuous operation. Business considerations often interfere with his work. (Photo Hine)

We may even go further and say that an inescapable requirement for productive efficiency in modern industry is that the worker should not only feel himself a part of the group and

have long association with it so that he feels tied to it emotionally; but that also he should have such a stake in the business that he feels a sense of personal responsibility for its proper functioning; and there is no other way to achieve this sense of personal responsibility except by permitting him to become part owner and therefore a part director of the organization itself. The obvious advantage in this is that it re-creates something of the well known fidelity to the industry as an institution



which we see, for instance, in the small shopkeeper or which we might have seen if we had lived during the time of craft industry. If the industry is partly the worker's he must feel that criticism of its operation or its product is in part a criticism of him and it must hurt him to hear such criticism just as it must please him to hear praise of it. Until that sense of responsibility has been developed there can be nothing like the needed development of enthusiasm for voluntary endeavor in industry.

### 7. *Social Approval for Productive Efforts*

We have already suggested also that workers must be given not only a certain sense of responsibility and control within the industry itself but a certain social approval for their productive efforts from sources outside the industry. For a man's whole life is not his working life. Yet we can see that his working life must be made an integral part of his whole life so that his life is unified and complete, not departmentalized.

As things are now there is undoubtedly a very dangerous tendency to separate the activity of the working life from all the other activities in which people engage, and so to make of it something separate and apart—something which bears no relationship to the home, the school, the church, and the other social institutions through which men express themselves. This is, it must be said, mostly a result of the separation of the home and the place of work; for under the guild and the craft systems the home was the place of work and this was also true, of course, of rural communities everywhere.

The farm, par excellence, is a double workshop. On the farm are grown the crops that are sold, of course, and that go to feed the rest of the community; but there is also created on the farm a home and a way of life that is distinctive, and on the whole satisfactory, just because of its close relationship with productive activities. The man and the woman involved are genuinely partners, each managing a department; but each coöperating fully with the other. Each knows what the other does. Each gives the other the praise or sympathy in the crises of life that is so precious a reward and so full a consolation.

When we contrast this life with that which is lived in urban centers we see how great a change is involved. Where industry

has been moved into huge factories, and the home life is carried on at considerable physical distance and certainly at very great spiritual distance, and where the wife no longer understands the problems that are involved in the husband's work, she no longer feels a sense of responsibility for increasing his productivity because she does not understand how, specifically, that can be done; and even less, of course, do the children of the family understand what it is the father does while he is away for so many hours of



A farm haying scene—with the family participating as never in urban industries. (Courtesy National Child Labor Committee) (Photo Hine)

the day, and what the relationship is that his absentee activities bear to their own interests in existence.

The consequence of this is that the family, which includes those individuals dearest to the man and whose praise he therefore values most highly, yields him none of the rewards of confidence and approval which were once the main support of the worker's productive efforts.

And, if this is true of his family, it is even more true of his neighbors, who are perhaps engaged in other activities, and even in other factories, so that when he goes to church with them or meets them in social gatherings of other kinds, he cannot feel that sense of a community of responsibility and understanding which he might feel if there were among them productive activities that were being carried on in common.<sup>1</sup>

How to re-create this social approval for productive efforts is very difficult to see so long as industry is carried on so completely separated from the home as it is at present; but there may be a suggestion of a way out in some of the developments that we can see in industry at the present time. There is a tendency, for instance, to create garden cities and to make the factory merely the center of the other social activities of the village life; and to make it not only a place of work but also a place for social gatherings, and for the creation of all the institutions that go

<sup>1</sup> Cf. R. G. Tugwell, "The Distortion of Economic Incentive," in *The International Journal of Ethics*, xxxiv, 272-82 (April, 1924).

to make up a rounded community. We cannot here develop further a description of the possible ways in which a recovery of this lost approval for productive activities can be effected. We must be content simply to point out that this must be a necessary feature of the industrial future if that future is to use more completely the productive energies of human beings.

### 8. *Safeguarding Health and Tenure*

Along with these other considerations, it may be well to add that industry needs also, if it is to utilize human energy more effectively, to safeguard the long run period of activity of man. And this again is a department of life that has been intolerably neglected in the development of industry, largely it must be said, because industry did not develop as a social institution, but primarily as an institution for the making of profit.

When industry existed in small units and when it found these subject to the recurring depressions that sweep

over the whole field of industry, it defined its relationship to the individual workman in very selfish terms. It accepted none of the responsibility for his lifetime activity; it accepted responsibility only for the payment to him of a stipulated wage for a very short time. Usually, it did not guarantee his employment for longer than the day or the week or, possibly, the month for which he had been en-



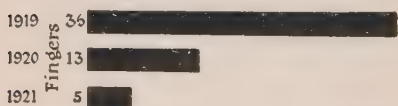
**THE RIGHT TO WORK?**  
(Courtesy *Hobo News*)

gaged; but since workmen are shortsighted and also since they are weak in bargaining, wages had a constant tendency to fall to the level which would support a family for the period for which the wage was paid.

The result was that if a worker received a wage for a week, it was likely to be no more than enough to keep his family for a week. If his employment lasted for a few weeks and then there followed a period of unemployment, it would involve privation and hardship, often of unbelievable severity, for the dependent family. Public opinion, and the organization of the workers, alike, have shown a considerable tendency to bring about a change in this respect. Organized workers are demanding that they receive a wage sufficient to carry them throughout the year. They are saying that it is the responsibility of the industry, to which they devote their efforts, to provide them, not with part-time employment but with full-time employment. And public opinion is beginning to rise against the social results that are the inevitable concomitants of periodic unemployment for workers, and to say that industry and not the community shall bear the responsibility for the provision of a continuous living wage for workmen.

All this pressure that is being brought to bear upon industry finds itself more effective because of the development of large-scale industry in recent years, for, as industries grow larger, the adherence to them of their personnel becomes of greater significance, and as they increase in scope and size, the part they play in the whole community becomes clearer; so that, while to a great extent the government has found it expedient to force employers' hands in the matter of workmen's compensation for

accidents and for unemployment and old-age insurance, industries themselves are often voluntarily enlisting in schemes for insurance against unemployment and for provision against the coming of old age.



This chart shows how a safety campaign in a metal working plant reduced finger accidents. (Adapted from *Industry Illustrated*, May, 1925)

It would probably be possible to expand this description of the ways in which human energy might be increased and more effectively used in in-



dustry to include a great many other factors and forces which are at work in the modern world; but perhaps sufficient has been said to indicate that there is great room for improvement in these respects, and that at the same time vast changes are under way which, on the whole, seem to promise the almost total reconstruction of industry in the interest of utilizing human energy that has been treated so cavalierly up to now. If we have used human beings to the limit of their capacity and then thrown them aside like pieces of worn-out machinery, the time has almost arrived when it will no longer be possible to do this and when the first task of the organizers of industry will be to see to it that the organization is carried out with a direct view to the normal functioning of human beings in all the varied tasks of the institutions of industry which furnish the goods and services upon which we depend for our means of subsistence.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Why do men produce? List some of the incentives.
2. Is there a sound basis for the emphasis certain business men are placing upon the relation between industry and a scientific application of psychological principles? Explain your answer.
3. Why are force and coercion unsuccessful means of obtaining the greatest efficiency from the human being? What way do you suggest as the most likely to obtain efficient results?
4. Explain the relationship between "social approval" and production.
5. Can you suggest any way in which the care of business for its workers can be made to equal the care with which machines and buildings are treated?

## CHAPTER 12

### DIRECTING INDUSTRIAL ENERGY TO DESIRED ENDS

#### 1. *Making Goods and Making Money*

We have already suggested, in one or two places, one of the very deep, inherent difficulties with the organization of modern industry: the opposition between making goods and making money. This is one of the paradoxes of industrialism which we meet at once in considering the problem of so organizing human and natural forces as to eliminate waste and to direct all energy to the desired end of production. For these opposing purposes are almost always present when a policy is being formed. In a system such as ours where goods are valued by their purveyors not for their possible uses and their desirability as instruments of life, but for their exchangeable value in the markets, it is often possible to make more profit by withholding them than by furnishing them in unlimited quantities.

If a business were rewarded and the individuals in it received their pay because, during a certain period, they managed to produce a certain standard number of useful goods, there would be no difficulty. But in our system of business, pay is not based upon the physical amount of goods produced but upon the power of these goods to command other goods in exchange for themselves. This power to command other goods economists sometimes call exchange value. It is to be contrasted with use value or the value of the thing to the individual rather than in the market-place.

It may be argued, of course, that these two kinds of value are synonymous; but this can scarcely be true in a world whose factories are closed and whose people are at the same time wanting very much the goods those factories make. It is evidently not a sufficient incentive to production that the world needs goods. If mere desirability were the reason for producing, and if the producers' rewards were gauged by the needs of men they supplied, such a paradoxical situation could not arise. Many re-

formers, of course, have concentrated their attention upon this situation and attempted to construct an imaginary world in which goods were produced to meet needs.

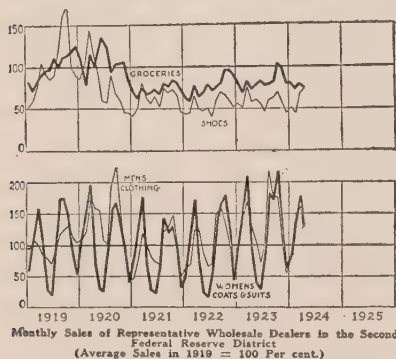
Thinkers have based a long line of Utopias upon this idea, but perhaps none of them has possessed a more effective logic than Karl Marx, who built up from the contrast of making goods and making money the whole doctrine of socialism in production and communism in use; Henry George also saw in his program for expropriating the increasing social values of land—the “single tax”—the possibilities of mitigating the hard circumstances of modern life. It was Henry George who coined the famous phrase, “progress and poverty,” putting the two in that same juxtaposed contrast which we have been employing here. “Progress”—the growth of material prosperity; and poverty—lives lived in want. But none of the reformers with his system of reform has been able sufficiently to capture the imaginations of people to persuade them to its adoption as a social program. Nevertheless, it is not often denied that the premises upon which their arguments were based are true enough: that the production of exchangeable values is a very different thing from production for the satisfaction of a people’s wants.

It is a fact that industry produces its goods, not in a continuous stream in answer to the needs of peoples everywhere, but in a constantly interrupted stream in answer to the demands of those who are best able to pay for them. This may very well lead, and as a matter of fact does lead, to the making of goods which can be justified only by the fact that some one is able to pay for them. The more expensive luxuries of life would never be manufactured at all in an industrial system which produced goods only to answer needs. By diverting our energies to producing luxuries we reduce immensely the total amount of satisfactions. For the most expensive things are often the least satisfying. The whole idea of producing in response to exchangeable value is contrary to the interests of the masses.

But there is another injury also to the consumers of necessities. The managers of a factory which is capable of turning out a very large amount of product will often find that they can enlarge the net earnings of the business by stopping the plant at periodic intervals, thus reducing the supply of the goods they manufacture,

and forcing people to pay more than they would otherwise have to do. This of course can only happen when there is a virtual monopoly of the product in the hands of the managers of the business; but this is not at all an unusual circumstance in the highly organized state of modern industry. A monopoly need be only such an arrangement as effects a control of price, not one which brings all the business making the product under one ownership.

One difficulty here is that monopolies are more likely to be gained in the purveying of those staple goods which are the necessities of life than other goods which are its luxuries. It will,



perhaps, be said that if these goods are *necessities* the price of them can scarcely be forced up because people will not have sufficient incomes to pay increases in price, that increases in price can only be paid by people whose incomes are more than sufficient to meet the requirements of a comfort level of life. The answer to this, of course, is that the consumption of the goods is reduced and that, instead of buying as large a quantity as they need or would like to have, people find themselves forced to do without. This is the way in which the price of even a necessity may be raised. The business which sells the goods finds itself

profiting more under these circumstances because it sells its reduced output of goods at a sufficiently high price so that the whole amount of its return is greater than would be the case if operation were continued at maximum capacity and the goods sold for what they would bring in a completely satisfied market.

Professor J. A. Hobson, the distinguished English economist,



considers this problem in a recent article. In speaking of productivity as the source of well-being he says:

Now, let us provisionally accept the hypothesis that more productivity is the safe and sufficient remedy, and seek the conditions of this productivity. The problem presents at present a very different face in Europe and in America. In nearly every European country the productive machinery is working slow, by reason of war and post-war damage to its finance, capital, labor efficiency, and markets. This damage is represented in unemployment, underemployment, and poor production. America, but lightly touched at present by Europe's economic disorders, presents to every European eye a spectacle of abounding prosperity, shared it appears substantially, though unequally, by a large majority of her population. A great people so well fed, clothed, and housed, and endowed with so much mobility and automobility, has never before been seen.

And yet in every gathering of business men and of economists it is argued that much more could and would be produced if— If what? If certain changes and improvements in the working of the economic system were attained. But they hasten to add "without any radical alterations in ownership and operation of the existing system, either on the part of labor, the state, or the public." Thus the question is fairly posed. Even in America the machinery of production is wasting power, by low functioning of labor or plants, or both, by inferior technique and organization, unreliable finance, unsatisfactory transport and marketing arrangements. How big the total waste is, nobody can do more than guess, and the guesses vary from, say, 50 per cent to 200 per cent. If the natural and human economic resources of the country were fully utilized, even up to the highest standards of equipment and operation actually in use, is it too much to expect that the output of available wealth would be doubled? At any rate, such an enlargement, and more, could safely be predicted for England, and for any industrialized European country. Such enhanced productivity we could take out in more goods and services or more leisure and enjoyment of life. Though the available natural resources will vary widely for different communities, sound trade relations will in large part pool any special advantages, as also the free flow of economic knowledge will generalize the command of man over nature, now admittedly adequate to supply all his legitimate needs.

What holds us back from realizing this economy of high production? It is necessary, first, to make it clearly understood that the "holding back" is at all points a more or less conscious policy of men engaged in industry. Restriction of output, for prolongation of the job, for spreading employment, sometimes also from laziness or for a check on "profiteering," is charged against the individual workman or the labor unions in many trades, with a considerable element of truth. Though, as we see, other motives may enter, the main pretext for this individual, or collective "Ca' Canny" of workers is the belief, often well founded, that markets

furnish no security for full continuous employment, and that, if they put out too much work, short time or stoppage will ensue. Economic sermons from economists upon the elasticity of demand which will necessarily follow low labor costs, and will reward the worker for his greater efficiency, fail to carry the necessary conviction to his mind. He has no faith in an early and inevitable expansion of the market for his personal labors. "In the long run" it may work out so, but from the necessity of his situation he is concerned with the short run. Blind to his own true interest, perhaps! But in Britain, at least, and to a smaller extent in America, labor is restrained from pursuing a policy of high production.

But what of the business men themselves who never tire of urging workmen to put forth their utmost energy so as to keep down costs? In times of rising prices and high profits they seek, indeed, to run their plants at high pressure. But at the back of their minds there is always a haunting fear, based upon long experience, that this policy of maximum production cannot last, that prices will soon decline, contracts fall off, profits disappear unless they and their competitors arrange to slacken the rate of output. This plainly recognized need to limit output, in order to maintain a reasonable level of prices and of profits, is the main incentive to the formation of trusts, combines, associations, agreements, by which cut-throat competition is suspended or displaced in most organized trades. The management of machine industry continually keeps a watchful eye upon the markets lest they show signs of being overstocked, in which case some slowing down of production will be expedient. Just as the worker fears the cutting of wages if he works too fast, so the employer fears the cutting of prices if his plant turns out too much. Mr. Veblen, no doubt rightly, exonerates the manager, as engineer, from blame for this periodic or, in some instances, chronic sabotage of industry, imputing it to the domination of finance, or "the price system." But the point is that amid all this talk of the need and duty of high productivity both capital and labor in their several interests tacitly and consciously agree upon restricting output. Though as a fully conscious business policy this restraint applies chiefly to the great standard manufactures and their raw materials and power, agriculture and most minor trades have the same dread of overstocking their market.

But there are other conscious policies of business men in most industrial countries that are hostile to the achievement of high productivity. Adam Smith rightly laid down the basis of his science of wealth in that division of labor, according to which men as individuals, local groups, or nations applied themselves specially or exclusively to the sorts of work for which they were, by their capacities, inclinations, and natural resources, best qualified, exchanging their diverse products with one another on the easiest and freest terms of commerce. Such is the efficient economy of maximum productivity for the economic world as a whole and for each person in that world.

But there have always been persons, or peoples, who, because their minds, by malformation or miseducation, see trade in terms not of co-

operation but antagonism, or because they are dominated by other non-economic considerations, set themselves to place obstacles in the way of this productive policy. As workmen they seek to stop other men from entering "their" trade, as business men they try to stop outside capital from entering "their" industry, as tariffists and hundred-per-centers they will check the free flow of foreign brains and labor and foreign goods into "their" country. This shortsighted selfishness in its narrower forms they dignify as trade loyalty, in its wider form as "patriotism" or "national economy." Without prejudging the question whether other considerations may or may not rightly override the gains of productivity, it is important to realize that all such measures rank as interferences with maximum productivity, and that all members of that coöperative society and all mankind must pay for them in reduced wealth. It may perhaps be urged that there are favored plots of earth, possibly whole countries, where this exclusive policy ranks as enlightened selfishness, countries virtually self-sufficient and able to keep their advantages for their own people. This possibility for the United States I will reserve for later examination; here merely noting that the presumption is against it as impairing the wider division of labor upon which the aggregate dividend is based. The setting up of tariff and other interferences with free movement of persons, money, or goods ranks as a practical repudiation of the gospel of social-economic salvation by high productivity. In many subtle ways it diminishes the productivity of the average man both within the protected area and outside. It may be said, and with a measure of truth, that the advocates of such policies, business men or statesmen, do not admit that their motive or result is a restriction upon wealth production. They often assert and possibly believe the contrary. But, when one probes their feelings and notions a little deeper, one soon discovers that the fears of foreign goods "invading" "our" markets involve a belief that an excessive supply of goods for sale must lower prices, drive the profits of "our" industries below zero, and spread unemployment among "our" workers. So we perceive how a cloud of witnesses give the lie to the fine professions about "productivity" as the simple and sufficient remedy for poverty and discontent. For it is not the niggardliness of nature nor the backwardness of science nor the inefficiency of labor that checks productivity but the refusal of man to set science to do her best with nature. Employers, workers, politicians conspire to hold back productivity and so halve the real income they might enjoy. Why do they do it? <sup>1</sup>

## 2. *The Individual and the System*

So we get the contrast between making goods and making money. As we have said before, this contrast is one between the engineering point of view and the business point of view. The

<sup>1</sup> *The Nation* cxx, 290-93 (Mar. 18, 1925). Quoted by permission of the author and the editors.

engineer is the technician of industry. He is interested in the smooth and continuous operation of its forces and any interruption of operation throws his whole scheme out of balance and ruins the delicate interrelationships of the functioning parts of his going system. These considerations are a very minor matter to the business man as such, except as they affect costs perhaps, and so profits. He is interested mainly in the final difference that exists between these costs and the total income from sales, and, as we have said, this interest is often best served by the stoppage of the plant and the cutting down of production, rather than by the development of the greatest efficiency possible and turning out the greatest product that the machines and factories under his control will manage.

And so we see that the very system of business that we have built up has in it this germinal quality of degeneracy. The very fundamental reason for the permission society gives to the business man to exist and to carry on his activities, is that his business shall function in the social system as the producer and the purveyor of the goods which form a standard of living, and no specious argument of individual necessity can cloud this final issue. Instead of performing this social function the business man often finds himself in the position of having to withhold effort and to stop the operation of productive forces. This is, of course, through no individual fault of his own. He operates in a system under its usual rules and the measure of success for a business man is, of course, the profit he makes and the profit he makes is determined by the difference between his costs and his returns from sales. He finds himself, reluctant or not, as he may be, in the position of having to conform to the rules of the game which he did not make and which he cannot change. Only society itself can change the rules of this game and prevent the withholding of effort that has crept so insidiously into the industrial machine and that threatens to overcome all our advances in technical efficiency.

It is worth noting also that the laborer has learned a lesson from the business man. He has seen that if he must sell his effort in a market, the less there is of this effort the higher the price he will receive for any given quantity of it. His interest, therefore, lies not only in producing effort but in limiting its amount in the interest of getting the largest net returns. And so we find organ-



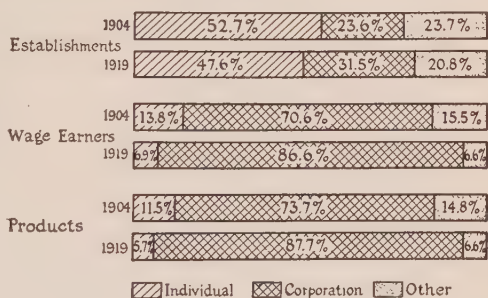
ized labor given over to the policy of giving as little as it can for as much as it is possible to get. In fact, this last phrase, giving as little as possible for as much as it is possible to get, might be taken as the motto of our whole business system.

To the inquiring mind, which clears itself of any prepossessions in favor of the going system, it is difficult to understand just how it is that such a system grew up in the first place, or was permitted to continue to exist in the second place, for it is by this withholding of effort that society applies a needless brake to the wheels of the progress that it has labored so hard and so long to set running. The effort to organize industry in the interest of directing energy to desired ends must have, as one of its very first objects, elimination of this withholding of effort that runs all the way through the business structure of modern society; and the complete going over to the principle of operation for the production of goods rather than profit. Management will not confine itself to its real job of directing production rather than rigging the market or withholding product or effort in order to establish a higher price, until the whole system is changed under which these doubtful activities receive a reward. Society must give its rewards only for productivity, only for industrial service, and it must rigidly withhold the encouragement it now gives to those individuals who do it not the greatest service, but the greatest disservice.

### 3. Increase in the Size of Business Units

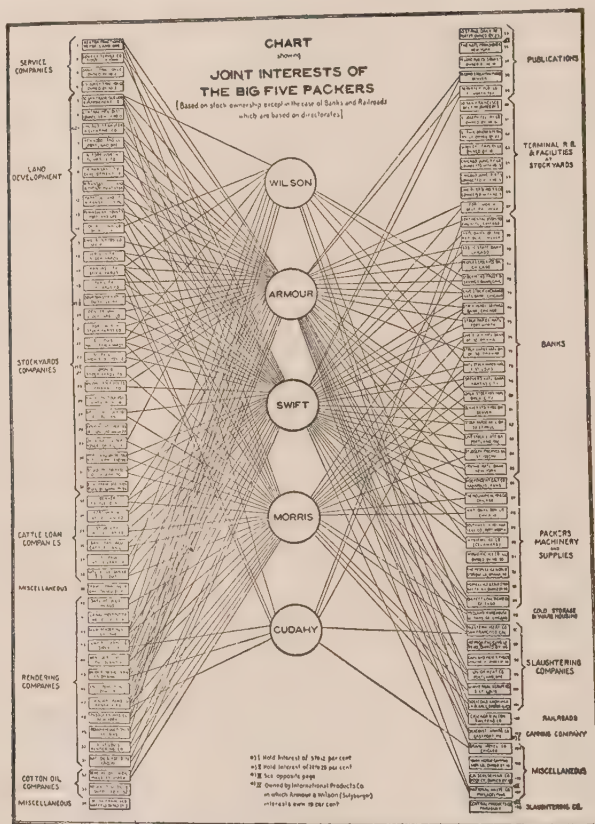
Another consideration in organizing human and natural forces

so as to eliminate waste and direct all energy to desired ends is to achieve the most efficient physical industrial arrangement that is possible. In recent years, the most efficient arrangements have



This chart shows the growth of the corporate form of business—a partial picture of the combination movement in business. Individual firms control still a considerable number of establishments but in the total production of the United States they are inconsiderable, for corporate business in 1919 employed 86.6% of the workers and turned out 87.7% of the products.

usually seemed to be those involving most specialization, most centralization, and most combination, but this has not been invariable, for although large business has, for the most part, grown



This chart is obviously out of date; many changes have taken place in ownership and control since it was made. It is introduced here to show in graphic form the interrelations, or communities of interest, of the large corporations in typical fields of endeavor. Since 1918 there have been several attempts to bring about closer relations among the Big Five of the meat-packing industry. (From the Summary Report of the Federal Trade Commission on the meat-packing industry, July 3, 1918)

at the expense of small business and combination has taken the place of competition, there are some small businesses which appear to be still the most efficient for some purposes. Combination

may be efficient only for the getting of a high price by stifling competition through unfair means rather than for the establishing of greater efficiency in production. It may again be premature or unwieldy and so bring no real saving in energy. But, on the whole, it must be said that the history of industrial combination in the United States in the last fifty years offers the general picture of increase in size of the business unit. This is so general, and the reasons for it appear so plain, that the observer is forced to the conclusion that the development of large-scale business is really more efficient for production. If this is so, then combination is here to stay. Persons who argue that the so-called trusts are necessarily inefficient because they establish themselves by trickery, by brute force, or by the corruption of government officials, have plenty of illustrations of this kind of thing in the history of trusts in the United States; one has only to read the histories of the Standard Oil Company, the International Harvester Company, the National Cash Register Company, the National Sugar Refining Company, or of many other such combinations, to learn that all that has been said concerning their viciousness is true, but more important than all these facts which are today undisputed, there remains the fact that they have proved actually more productive than the smaller units which existed before they were combined.

A picture of business in the United States today is a picture of gigantic corporations, covering, each of them, a large part of the field of the various industries and controlling the output of the product that is created by that industry. This combination, of course, has not always taken the form of the creation of a gigantic corporation which literally owns the whole physical property of the industry. It may be achieved by different kinds of arrangements among the businesses themselves. It may be that there is only the kind of understanding that is usually employed in trade associations, or it may be that one company owns a controlling share in the stocks of several other companies which would otherwise form competition for it. We shall discuss these forms of combination somewhat more at length later on, but the main point here is that, however they are formed, these are, to all intents and purposes, combinations which control the amount of production and so the price of the product.

#### 4. *Social Policy and Combination*

In the effort to see how society can best direct this development of combination in industry so as to bring out of the movement the greatest application of human energy to production, it is first of all necessary to admit the genuineness of the savings that are made and the actual superior efficiency of larger-scale production. It may be, however, that the best interests of society are scarcely served by the combination into one firm of the concerns owning factories in different parts of the country, for each of them must attain by itself whatever efficiencies are possible. There is no gain from reducing duplicated effort here. On the other hand, it may be that general planning for the necessary output of the whole industry can only be attained by the combination of all the plants which are involved in the output of the product and in such a case, of course, nothing less than complete combination in the industry would have the desired effects.

The difficulty with this combination, of course, would be that although it was formed for purposes of achieving superior productive efficiency and the coördination of productive effort, it might, when once attained, be used for purposes of the exploiting of the consumers of its products. This could only be prevented, of course, by some kind of official regulation and control of the various forms of industrial combination.

The first reaction, as would be expected, to the combination movement of the nineteenth century, was the attempt to smash all combinations and to return to what was then believed to be the most desirable basis for economic organization: the system of *laissez-faire*, or free competition in industry.

This was on the theory that competition always reduced prices to the level of the cost of production and therefore achieved all the protections for consumers that could be desired.\* We are inclined to the view now, however, that the smashing of large combinations and the return to the small industrial units may involve such very great inefficiencies of operation that it would be better to permit combination even if the result were a control of price, because even with controlled prices, they might be lower than they would be in a system of free competition with its high producing costs.

The whole policy of the United States with reference to this



combination movement is still in a very fluid state. Our legislatures still seem to cling to laissez-faire ideas and are afraid to recognize combinations and to attempt to control them constructively. But, on the whole, we do seem to tend in the direction of control, as for instance in the matter of the new proposed regional consolidation of our railway lines; it must be said, however, that there is an almost equally strong tendency to limit the extent to which this combination may be carried.

Although it seems to most economists, as a practical matter, that it would be most desirable to recognize the efficiency of combinations and to permit them to take place under proper direction and control, it is true that under the price system, combinations are perhaps oftener formed for purposes of control of price than to make efficiencies in production, and where this is true, there is no reason why combinations should be permitted. Then too, in all industries there is a very real danger of the loss of that individual enterprise and freedom for variation which were so conspicuous a feature of the development of industry under laissez-faire and which it would be too bad to lose altogether. Excessive organization may very well have the effect of smothering progress. The most we can really say in this matter is that, where combination is useful, government regulation may be used to secure its benefits to the public and that all types of organization may very well be limited or so modified as to prevent the loss of the enthusiasm generally supposed to be superior in individual enterprise.

### *5. Increased Specialization*

If it is true to say that there has been an almost continuous movement toward larger units in the field of business organization, it is quite as true to say that there has been a movement toward reducing the number of functions performed by each individual in industry. These two trends were complementary, as we shall see.

The contrast between the kind of work that is performed by most workmen now and that performed in any pre-industrial time gives us a new view of some of our modern problems. To put it baldly for emphasis, the medieval worker did all the tasks involved in making, say, a pair of shoes. The modern worker does only one small, limited part of the whole task. He has become

specialized in a sense that was never known in the pre-industrial era. Then specialization consisted in confining the activities to making one thing; now specialization consists in doing perhaps a hundredth or a thousandth part of these activities.

Machines did not cause this specialization as is sometimes suggested. On the contrary, specialization made possible the machines. For tasks have to become minutely restricted and rigidly repetitive before machines can perform them.

The logical end of the specialization of functions in industry is



the reduction of all of them to their simplest movements and their performance by machines. This would leave to the men in industry only the task of keeping the machines running. We shall not reach this millennium for a while yet at least, if for no other reason than that it supposes a static economy which we do not have. So long as population grows and we make new inventions, discover new processes

A worker specializing in the assembling of parts for radios finds little variety in his work. (Photo Hine)

and make use of new raw materials we shall remain constantly in a transition state in which the unperfected analysis of functions makes it possible for them only to be performed by men.

The fact that tasks tend toward repetition, however, makes a grave human problem, for, although the human body may in a sense be considered a machine, it was not formed as are industrial machines, with a view to the performance of repetitive tasks. It is a strain upon it to be forced to do them; and, incidentally, a great waste of its capabilities. It possesses also a mind that is influenced by the nature of the activities the body must perform, and which possesses the power to direct the bodily mechanism.

If it is outraged by the activities of the body it will certainly revolt and drive the mechanism it controls into perverted and distorted action.

In the attempt to find the best way of directing human and natural energy to the desired end of production, there has then been a constant movement toward specialization and a constant revolt against it until it was taken over by machines. The direction of development obviously cannot be backward toward generalized work for that would not furnish the standard of goods we need. Inefficiency is involved. It must be then forward toward speeding up the logical end of specialization so that more monotonous and fatiguing tasks may be taken over by machines and men released from them.

#### 6. *Interdependence and Coördination*

Along with specialization has gone a necessary corollary development of interdependence. For obviously the man who does one small operation upon the sole of a shoe is dependent upon those who perform the other operations contributory to his, if there is ever to be a finished shoe which may be sold to furnish income for all the workers upon it. So that along with the problems raised by specialization there have come into existence the complicated problems of industrial engineering which relate each task to every other and bring about so nice an adjustment of functions that just enough and no more effort may be spent at this or that form of effort and just enough and no more materials shall be provided to complete a carefully worked out production program.

We shall examine these problems somewhat at length in another chapter when we have gone a little deeper into the problems of the organization of the industrial unit. For it must be seen that we have always, in studying industrial efficiency, to keep in mind the twofold nature of the problem. We have to consider it both as an individual and as a group adjustment. From the individual point of view there is specialization and coördination; but for industrial groups there is a similar problem. Not only are the workers in a shoe factory interdependent, but they as a group are also dependent upon other industrial groups. They might wear their own shoes, but they could not wear them all;

and certainly they could not eat them. Their relations to food-making and other industries are obvious. Both these phases of the problem need attention.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Does "making money" always involve "making goods"? Does "making goods" always result in "making money"?
2. Are the contents of the worker's pay envelope a good measure of his income?
3. A penniless individual stands looking into a bakery window. What influence does his desire bear upon the production of more bread?
4. List some of the more important factors which have made for larger business units. Are these enlarged business units only "mushroom" growths, or are they stable parts of the economic structure?
5. What is specialization? In what industries or types of industries does one find the most specialization?



## CHAPTER 13

### BUSINESS ORGANIZATION AND OWNERSHIP

#### 1. *The Entrepreneur*

It is perhaps true to say, in general, that this is the age of the corporation and that the day of the small business man is past; and yet there are still many small business men left. They



The small business-shop of the *entrepreneur*, one of the few places left in our industrial system for the small business man. (Photo Hine)

carry on a great deal of the retail business of the country, especially, of course, in the small towns, and operate what remains of the handicraft industries, make fine furniture and clothes or carry on businesses that exploit some small patent or other. They are, of course, very much less common than they were in the

early years of the industrial system, but the small business man of today who starts in on a small capital and builds up a business of his own, is the very prototype of the individual who started the industrial revolution by hiring a few hands, furnishing them with the raw materials of their trade and a place in which to work, and who then undertook the disposal of the product. He paid them their wages and met the other expenses of the business, and what was left over was his profit. When as often happened he made great efficiencies by the introduction of machinery or the development of new processes or patents, or when he was peculiarly fortunate in the market, he made very large profits and was able perhaps to build up a very considerable business and become what we call sometimes a great entrepreneur. This type of individual developed into the single industrial autocrat so common in the nineteenth century. Many of our prominent business concerns have been built up by this kind of individual. He is still not unknown, even in our highly socialized system. He is the person who borrows some capital, paying interest for it, buys or rents his site, and builds his plant, buys and installs machinery, hires labor, purchases raw materials, supervises the productive operations of the plant, and sells the product. This sort of productive unit, run by one man, may reach an indefinitely large size and may become very complex, with all of its subdivisions automatically ruled from the top. The career of such a man is often very romantic and intensely interesting,<sup>1</sup> but he belongs to the past. Indeed, the very business which he himself has built up tends to adopt the corporate form when its autocrat dies or when its complexity grows too great for a single individual to manage, no matter how great his personal genius may be. The corporation has for this reason become the typical modern form of industrial organization. As a matter of fact, it produces very nearly ninety per cent of all the goods produced—in the United States at least. And for this reason it deserves a very much more extended consideration from one who is trying to understand the problems of industry than do the individual business men who were the typical personalities of an older way of industrial life.

<sup>1</sup> See for instance, the *Life of Robert Owen*, by himself, Garet Garrett's *The Driver*, and Theodore Dreiser's *The Genius*.

## 2. *The Partnership and the Corporation*

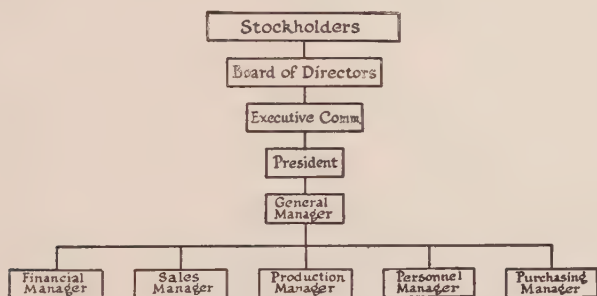
It is usually true, then, under modern conditions, that the smaller units of business tend to coalesce and that the great industrial autocrats tend to lose their power, in time, to the corporate form of organization or, as it is called in England, the Limited Company. There is unquestionably this tendency, at least for the larger units of business organization, to admit more than one individual to a share in the ownership and management. There have been in the course of time a number of different devices for obtaining this joint ownership. Prominent among them have been the joint stock company, the partnership, and the corporation. The joint stock company has nearly disappeared. The partnership has proved itself adaptable to certain restricted areas of business, such, for instance, as the joint practice of a profession. Law firms are often partnerships and physicians often merge their efforts by this device. But it has gradually lost ground to the corporate form, particularly in the larger fields of manufacturing and of generally more complicated business affairs. There are a number of reasons for this, but perhaps the most important is that the partnership does not provide, as does the corporation, for a limitation of the liability of its owners. There are other reasons, of course, such as the fact that a partnership becomes unwieldy when there are more than a very few individuals concerned. The partnership also is not, like the corporation, self-perpetuating and interminable except at the discretion of its owners. The partnership automatically terminates with the death of one of the partners, and this is not true of the corporation.

For these reasons as well as for others into which we have not gone, the corporation has gradually become the dominant form of business organization in our industrial system and therefore warrants a somewhat careful examination both on its structural and on its functional sides. The first thing to be said, perhaps, is that, under our law, a corporation has a legal personality; that is, it is able to sue and to be sued, to inherit and to carry on business; in fact, to do any of the things that an individual may do, in spite of the fact that it itself is, of course, a depersonalized institution. Closely related to this feature of corporate organization, is the limitation already mentioned of the liability incurred by a person who buys a share of ownership in it. We have al-





The corporation, also, has proved itself adaptable to any of the various fields of industry, in which private business operates. The form adapts itself easily with some slight modification to manufacturing, to wholesale and retail trading, to transportation, to banking, in fact to all the different kinds of business in the modern world. In order to get a glimpse of the functioning of the corporation we might consider for illustrative purposes



A generalized organization chart of a corporate business. The owners (stockholders) of the business delegate the power of control on all but matters of general policy, to a smaller group (board of directors—usually stockholders). An executive committee appointed by the board of directors will, through a president, carry on the organization of the business. The general manager is the “*liaison officer*” between the “inside” group (the several specialist managers) and the “outside” group (owners, directors, etc.).

any of these different fields of business; but perhaps we shall make our description more representative if we examine the structure and functioning of a corporate manufacturing enterprise. We shall have to look both at its technical productive and its business sides and at the coördination of its various parts as they operate together. The chapter immediately following will be devoted to this purpose.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Account for the increasing importance of the corporation as a form of business organization in modern industrial society.
2. Compare the advantages of the three forms, single entrepreneur, partnership, and corporation, as to: (a) flexibility, (b) permanence, (c) ability to raise capital, (d) risk shared by participants, (e) unity of control, (f) disposition of profits.
3. Is the number of small enterprises decreasing?
4. Give examples of well known business concerns and classify them according to their form of organization.

## CHAPTER 14

### THE TECHNIQUE OF CORPORATE PRODUCTION

#### 1. *The Technical Productive Side of a Corporate Manufacturing Business*

Today we are much more apt to think in terms of the financial side of the corporation and of the business office than of the plant. It is our purpose here to remedy this lacuna of our economic think-

ing and to give some consideration to the technical productive side of the corporation's manufacturing business.

With the growing importance of the corporation and the increase in the complexity of its control, the need of working out certain definite methods of administration and management has become evident. Whether it be the location of a new plant, the organizing of work in the plant, the handling of the "labor problem," or



Power plant at the River Rouge factory. Adequate power facilities exert a great influence in the location of a factory. (Courtesy Ford Motor Co.)

the disposing of the finished product, the industrial engineer, the accountant, the statistician, the personnel manager, and the sales manager are called upon to coöperate toward the end of insuring efficient planning and control.

Where formerly plants were located haphazard or by rule of thumb, there is now a definite tendency toward careful surveying of the many factors which may exert great influence on the ultimate success of the venture. We shall consider these factors first and then develop some other aspects of production technique, especially the planning of the factory itself, methods of establishing and maintaining relationships between managers and workers, and the whole philosophy of "scientific management."

## 2. *Plant Location*

In general these location factors may be listed as: raw materials, power, labor, and the selling market for the product. These will influence different plants in different ways and in varying degrees. It is evident that some industries must of necessity be near their sources of raw material. It would not be efficient to ship the materials necessary for making brick to some distant location in order that the plant might be assured an ample supply of labor, nor would we expect to find salmon canning in Wyoming. Modern science and ingenuity have, however, circumvented many of the limitations imposed by nature. Many eastern canning and preserving companies ship loganberries from the Pacific Northwest for making preserves to supply their trade. These loganberries are packed in barrels with sugar and receive no other preservative treatment until they reach the eastern factory. At one time tanning factories were concentrated around the regions where tanbark could be obtained. Now, however, chemistry has extracted the necessary element from the bark and tanning is carried on closer to the areas in which there are many plants using leather in their manufacturing processes.

Power is not now the limiting factor it once was in the manufacturing process. The improved transportation systems are able to supply coal for the production of power in practically any region. Electricity has increased the range of the use of water as a source of energy. Where formerly mills found it necessary to locate along streams where water power could be directly applied to their machines, factories can now be located in a more accessible place and receive the power from the waterfall in the form of electric current. But even with this greater flexibility, factories are in general located in regions of large power

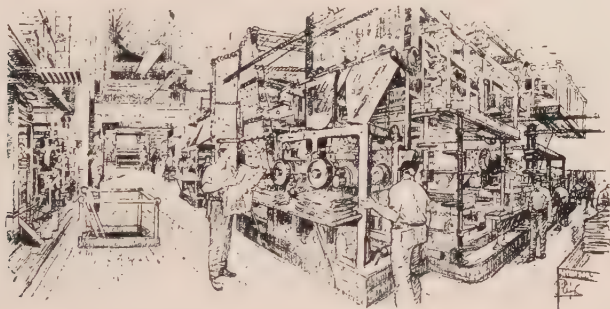
resources. The individual power needs of a plant, of course, exert much influence upon its location. Such processes, for example, as the manufacture of certain chemicals and abrasives will in all probability continue to be located near our large power sources just as the manufacture of corundum and calcium carbide is now located at Niagara Falls. This is also true in the manufacture of iron and steel in Pennsylvania, although here the process is perhaps more dependent upon the supply of coal as a fuel for smelting than as a source of power.

Even though there is an increase in the use of machine processes as compared with hand processes, there yet remain enormous demands for human labor; and so, in securing a location for a new factory, the management must be assured of an adequate labor supply. A large plant will perhaps often be able to build up a sufficient labor group in a region where no adequate supply has previously existed. A small plant, on the other hand, would find this impossible, and would probably have to take advantage of some already established labor market, even though there were other disadvantages involved, such as those of insufficient power and raw material. Some concerns have built up labor groups by a long period of intensive education; but in general, the best labor markets are the large cities. Also it is worth noting that these same cities are the best markets for the final articles of production. And it is for this reason that we find many industries flourishing in and about large cities, which, according to the influence of the power and raw material factors, should be elsewhere. Many concerns have found it possible to locate in places where they can utilize the labor of women and children. This is true in such places as mining towns and steel manufacturing centers where the men are employed in the mine or steel mill, but where women and children have no employment. These concerns—such for instance as textile mills or paper-box factories, which depend largely on woman or child labor—are thus able to obtain a cheap supply of labor, especially if there are frequent periods when the men are unemployed and the women and children find it desirable to supplement the income of the main wage-earner of the family.

Getting the products made by it on to the market is in a sense the aim of a manufacturing business, so easy access to the market



is an important factor in determining the location of any plant. There are many industries for which this is the all-important consideration. This is true of industries, such as bakeries and confectioneries, which are turning out a product that must reach the consumer in a fresh state or at least very soon after being produced. The daily newspaper plant must be located in the midst of concentrated population areas even though land values and transportation costs of raw materials be high. The newspaper sells news and the market for this product is in the area of concentration. On the whole the market factor is one of the



A newspaper sells news, which necessitates the maintenance of an extensive plant in a metropolitan area. (Courtesy *N. Y. Times*)

most important considerations that must be figured on in plant location. There are, however, many products which can profitably be transported for further treatment only after being subjected to some intermediate concentration process. This is true in the production of many metals. It would not usually pay to ship the ores of lead or zinc as they come from the mines of the Rocky Mountains, but after a concentration process the concentrates can be shipped to New Jersey for further refining.

We find whole industries centered in certain parts of various states. The accompanying table shows examples of such concentration:

LOCAL CONCENTRATION OF CERTAIN INDUSTRIES<sup>1</sup>

Industry	State	% of Total Value for U. S., 1909
Collars and cuffs.....	New York	92.3
Artificial flowers and feathers and plumes.....	New York	88.2
Plated ware (not including silversmithing).....	Connecticut	77.4
Fur goods.....	New York	73.8
Clothing, women's.....	New York	70.8
Pens, fountain, stylographic, and gold.....	New York	67.9
Needles, pins, and hooks and eyes.....	Connecticut	63.3
Gloves and mittens, leather.....	New York	60.7
Millinery and lace goods.....	New York	60.7
Pipes, tobacco.....	New York	60.5
Firearms and ammunition.....	Connecticut	58.6
Clocks.....	Connecticut	55.7
Coke.....	Pennsylvania	54.1
Iron and steel, steel works, rolling mills.....	Pennsylvania	50.8
Turpentine and rosin.....	Florida	47.2
Clothing, men's, including shirts.....	New York	46.8
Boots and shoes, including cut stock and findings.....	Massachusetts	46.1
Ink, printing.....	New York	45.8
Brass and bronze products.....	Connecticut	44.6
Iron and steel, blast furnaces.....	Pennsylvania	43.1

Detroit has become synonymous with automobiles; Grand Rapids, with furniture; Troy, with shirts and collars; Meriden, with silverware; Pittsburgh, with steel and glass; Chicago, with meat products; and Rochester, with cameras. These specialized communities have many advantages, especially if their growth is mostly dependent upon factors other than the momentum of an early start. A trained labor force is apt to be found there. Buyers naturally gravitate to such centers of concentrated production. Also there are to be found there the concerns supplying machinery and repairs to the major industries, as well as concerns supplying minor materials necessary in the productive processes.<sup>2</sup>

These specialized communities are apt to have some disadvantages. The disadvantages, however, are more concerned with the welfare of the laborer than with the technical processes of manufacture.<sup>3</sup>

<sup>1</sup> Adapted from Marshall and Lyon: *Our Economic Organization* (Macmillan, 1921), p. 170.

<sup>2</sup> Even the banks in these sections are specialists in financing the prevailing industry.

<sup>3</sup> Cf. Chapter 18, especially passages dealing with city housing.

The following table or classification of the importance of the several factors of plant location gives a certain definiteness to the problem:

### WEIGHING OR WEIGHTING THE IMPORTANCE OF DIFFERENT LOCATION FACTORS FOR INDUSTRY <sup>1</sup>

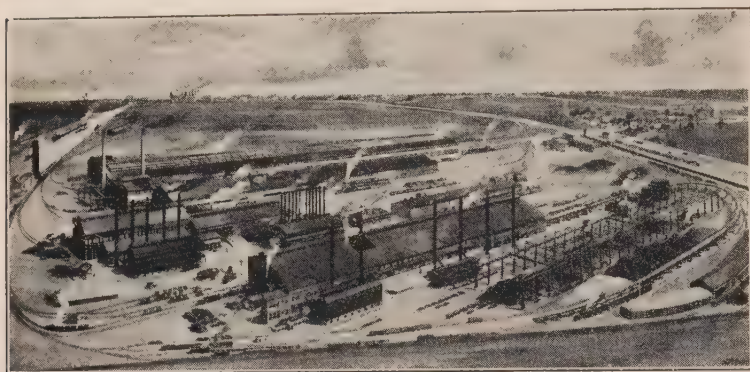
1. Weight,  $1\frac{1}{4}$ ; proximity of raw material market, including rail service, water service, and supply.
2. Weight,  $1\frac{1}{2}$ ; proximity to consumer's market, including large cities, rail service, water service, advertising value or influence of plant and competitors.
3. Weight,  $2\frac{1}{4}$ ; labor market, including character of labor and supply, percentage of unemployed females (women and girls), percentage of unemployed boys (above legal factory age), price of labor, cost of living, specialization of labor, influence of climate and associations or unions.
4. Weight, 1; power, including price and character of fuel (coal, gas, oil), hydro-electric or water power, and central station.
5. Weight,  $\frac{1}{4}$ ; influence of climate on labor and on product.
6. Weight,  $\frac{1}{4}$ ; utilization of waste products, including disposal of waste products, market value of waste products, and cost of disposing of same if unmarketable.
7. Weight,  $\frac{1}{4}$ ; perishability of raw materials, and of finished product.
8. Weight,  $\frac{3}{4}$ ; freight rates on raw materials and on finished products.
9. Weight,  $\frac{1}{4}$ ; legislation, regulation, or ordinances, including state legislation (corporation laws, taxes, employers' liability) and municipal, town or country regulations or ordinances (taxes, factory building inspection).
10. Weight, 1; banking facilities, including size of, handling pay rolls, etc., credit, and general utility.
11. Weight,  $\frac{3}{4}$ ; site of real estate (city, suburb, country) including price of, character of soil, cost of preparing site, foundations, and floods.
12. Weight,  $\frac{1}{4}$ ; building materials, including local sand, gravel, etc., crushed stone, brick, timber, steel, and cement.

We can now plainly see after the above discussion that, in the main, factory location comes about through the interplay of several factors, and the equilibrium of the forces of power, labor, markets, and raw materials, interacting on each other. This is set forth in the "Wellington Rule," which says:

"The best location for any economic unit is the one which

<sup>1</sup> Harold V. Coes, "The Rehabilitation of Existing Plants as a Factor in Production Costs," *Engineering Magazine*, June, 1925, pp. 358-59.

yields the largest difference between capitalized gross income and total capitalized cost.”<sup>1</sup>



Photograph of a painting of the Open Hearth Alloy Steel plant near Chicago, situated favorably for power, raw materials, markets, and other important factors which determine the location of a successful plant. (Courtesy Interstate Iron & Steel Co.)

### 3. *Factory Planning*

After the plant location has been decided upon, the next problem is that of planning the factory itself. It is not enough to say that the factory ought to be well constructed and to have ample provisions for light and ventilation. It should be constructed also with a direct purpose of adapting it to the specific processes of manufacturing for which it is to be used. Millions of pounds of factory goods are unnecessarily rehandled in our American factories year after year because of the improper development of plant layout; and the fundamental consideration here should be the study of the necessary operations and their requirements for space, air, and light. Then the design of the plant should be such as to properly house these processes. Proper layout is best achieved, of course, in a newly constructed plant

<sup>1</sup> “Costs here means not simply the individual or internal costs of an establishment but the entire chain of costs involved in bridging the gap between supplies of raw materials and the consumers of the finished products. Thus the plant should not necessarily be placed where the making costs are lowest but where the sum of the costs for raw materials, transportation of the same to the plant, manufacturing, selling and transportation of the finished product to market will total the smallest possible sum, considering the market to be reached.”



especially adapted to the use to which it is to be put. The old rule-of-thumb method was to start new operations by hiring an old abandoned plant and fitting the new processes into it as best it could be done. Only with great reluctance does an industry begin in this fashion nowadays, unless, indeed, it is a very new kind of manufacturing and no sufficient capital can be enlisted to enable it to start on an efficient scale in a new plant. Many small and new businesses still start like this, of course, in sheds, or in old plants. But they are handicapped from the start.

In earlier times one plant would make printing presses, blow-engines, water turbines, marine engines, mill engines, mining machinery, and in fact, everything for which the firm could obtain a contract. Modern machine shops confine themselves to the building of one or two classes of machinery. If the firm does engage in making more than these limited lines of machinery there will, in all probability, be a special department or shop for each of the different types. One American concern, for instance, builds nothing but cranes, another milling machines, another locomotives. The same is true of most industries at the present time. Textile manufacturers limits themselves to the making of ingrain carpets or rugs or lace curtains. Shoe manufacturing is also quite as highly specialized. It is an age of specialization.

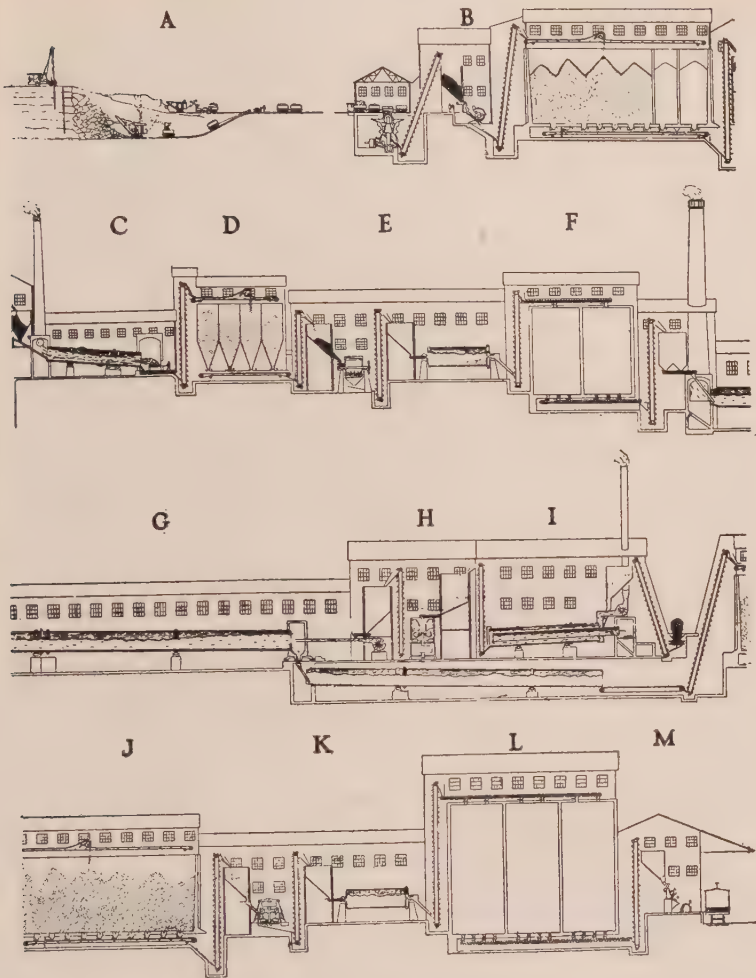
When the type of industry and the processes involved are known ahead, the plant structure can best be adapted to their particular needs. The industry may be of the so-called continuous type or may be of the assembling type. In continuous industries the processes necessary for changing raw materials into finished products are carried on within one plant. Some continuous industries may be thought of as synthetic, that is, raw materials are combined to produce a finished product; others may be thought of as analytic, that is, several products are the results of the breaking down of a single raw material. Of the former the manufacturing of cotton cloth, cement, and steel products are typical examples; of the latter the best example is the packing industry, which produces from the cow, the pig, and the sheep everything from the meat on our tables to the buttons on our clothes.

The other type, assembling, is a kind of industry in which the final product is made by first producing the various parts or ingredients and then assembling them. Automobiles, pianos, loco-



Picture of the Hudson plant.

The diagram on the opposite page shows in a general way the course of manufacture—from raw material to bags of cement. (Courtesy Atlas Portland Cement Co.)



The manufacture of cement, one of the best examples of a continuous manufacturing process. (A) Obtaining the raw materials, limestone and shale or clay. (B) The ore is crushed and stored in bins. (C) The crushed materials are removed from the storage bins and after a preliminary mixing, run through the dryer (C) and then to the blending bins (D). (E) The mixture goes through a further process of grinding and pulverizing and into storage bins (F). (G) The mixture is burned in rotary kilns until clinkers are formed. (H)(I) Further grinding and crushing of clinkers. (J) Clinker storage. (K) (L) Final grinding and pulverizing of mixture. (M) Cement placed in bags ready for market. (Courtesy *Concrete*. The original diagram has been changed to fit this text)

motives, and radio sets are examples of this type of process. Some of the assembling concerns receive the necessary ingredients and assemble them without the intervention of any important intermediary step. Shoe-making, piano-making, and toy manufacturing are examples. But there are many such industries as large tool manufacturing, or the building of locomotives and electrical equipment which involve many intervening processes or steps such as constructing the molds and the making of castings, or forging, milling, and turning.

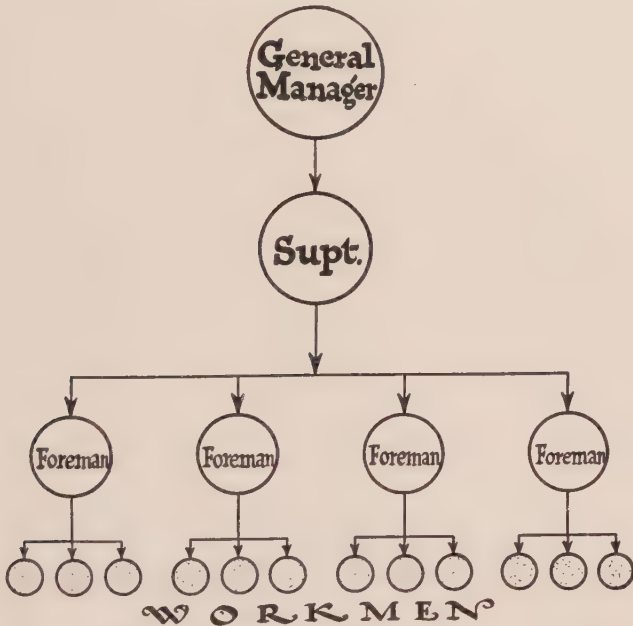
The location of machine units in the plant and the proper routing of materials to and from these units is an extremely important part of the layout problem. This process of arrangement of machine units to the best advantage is somewhat too technical for our discussion here. It is sufficient to say that they should be arranged in such a manner that the transportation route of any material in course of construction or assembling should be as short as possible and should also be as nearly as possible on the same plane. The arrangement of machine units will, however, be governed largely by other factors, such as the general location of the plant. That is, if land be cheap and the plant can be constructed on the level, the routing scheme will be very different from that of the plant constructed in the large urban center where floor space is gained by vertical rather than horizontal construction.

#### 4. *Management Organization*

Great advances in the mechanical features of manufacturing which have been described in the preceding chapters have been, to a great extent, paralleled by the advances in administrative methods. With the increase in the size of enterprises, the simple personal relations between the *owner-boss* and the men have been made obsolete and in their place less personal systems of control and management have developed. Under the older and simpler systems of production smaller numbers of men to the plant or shop were the rule. Each man might perform any or all of the operations and might even produce a complete article himself. With the increase in the size of industries, and with the increase in the specialization of tasks and the division of labor, these simple relationships have been replaced by departments especially



enjoined with the duties of bridging over this lack of personal contact between employer and employee. It is obvious that where large groups of men are concerned there must be some attempt made at discipline if there is to be order and efficiency. This is especially true with a large manufacturing plant where hundreds of men are at work. In order to obtain the best results, varying schemes of management have been evolved. Perhaps the

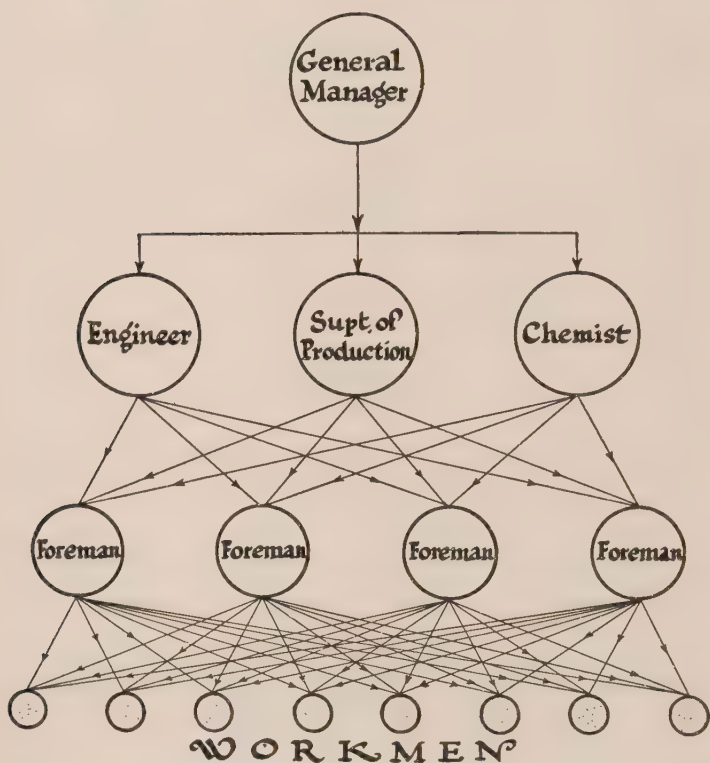


This diagram represents the military form of business control with authority centering in a general manager and passing from him through a superintendent and foremen to the workers.

oldest form of definite organization is the "military" or "line" organization, so called because of its similarity to the system used in army control. In this system the lines of direction or authority and instruction are vertical, so to speak. The men are divided into groups in such a manner that each group receives its orders and instructions of all kinds from one man only. Usually a gang boss gives orders and instructs. The above diagram will make the scheme of control more clear.

This type of organization has, perhaps, in the larger industries, seen its best days.

The other important type of organization is the so-called functionalized type.



This diagram represents the functional form of business control with authority for different functions centering in experts and passing from them through foremen to the workers.

“Functional organization consists in so dividing the work and management that each man from the assistant superintendent down shall have as few functions as possible.”<sup>1</sup>

The scheme is really a method of applying the theory of the division of labor to management. The workmen in a machine shop according to this plan are not under one but rather under

<sup>1</sup> *Transactions of the American Society of Mechanical Engineers*, Vol. 26.

several foremen. There should be, according to the best authorities on the plan, four shop bosses—gang boss, speed boss, inspector, and repair boss. The gang boss has charge of preparing the work up to the time the piece is set in the machine. The speed boss sees that machine speeds indicated on the card are attained. It is his duty to provide proper tools for workmen on the machine. The inspector is responsible for the quality of the work and both workmen and speed boss must finish the work to suit him. The repair boss sees that each machine is kept in working condition, is clean, free from scratches, and properly oiled. In addition to these four shop foremen or shop overseers, the workmen come into contact with representatives of the routing or planning department whose function it is to relieve the shop foreman of all thought of how the work should be arranged and distributed to the machines. There are four representatives in the planning department who have direct contact with the workmen. These are the order-of-work or routing clerk, the instruction card man, the time and cost clerk, and the shop disciplinarian. The routing clerk writes a day-list instructing the workmen and all shop bosses as to the exact order in which the work is to be done by each class of machine or man. The instruction card man prepares shop orders including standard instruction, lists of materials, standard working times, etc. The cost and time clerk sees that all time and materials used are carefully reported according to the job, workman, and shop so that correct pay roll and other cost records can be made. The shop disciplinarian keeps the personnel records on which promotions and discharges are based.

The chief advantage of the military or line type of organization is the ease with which discipline can be enforced. Also, the duties and responsibilities of each man are quite clearly defined and there is little room left for misunderstandings. However, this type of organization has some very definite limitations, which are becoming more evident as the size of plants increases. There is a tendency here to load a few men with the responsibility of management far beyond their ability to function properly. It is a rare man who is versatile enough both to administer the business side of the organization and at the same time to direct the technical side of production. For example, we would hardly expect to find many men in large plants, such as are prevalent in steel manufacturing, who are

capable of being both superintendents and chief designers. It is not reasonable to expect to obtain the greatest possible success over any period of time when the whole management rests upon the abilities of a few strong, capable men. It was in general these limitations which led Frederick Taylor to seek forms of management which resulted in the development of the functionalized type.

From the foregoing discussion of the functionalized type of management, it should not be hard to appreciate its distinct merits as over the line or military type. It is a logical outgrowth of the whole trend of the division of labor and makes the fullest use of the advantages which accrue from this division. Its greatest value lies, perhaps, in the fact that it conveys expert knowledge to each workman through experts and is not dependent upon a foreman who is only partially educated in several fields. Instead of expecting the foreman to discipline, instruct new men, lay out the work for the day, and see that all the men and machines are functioning properly, functional management allocates these to several individuals, each specially fitted to direct in his own field. The most obvious limitation of the functionalized type of management lies in the field of discipline. Success of plant operation in a strict functional scheme is dependent upon proper coördination of men and departments on the same authoritative levels. Authority assigned to each individual in the military type of organization is quite definite, but in the functionalized type there is apt to be much overlapping and conflict regarding the authority for certain policies.

As one might expect after having considered the advantages and limitations of these two types, some scheme of management based upon the relative merits of the two should offer a way out. Such has been the case; and the composite system is known as the "line and staff" form of organization. Skilled specialists head departments which look after particular phases of the business. The development of the line and staff idea utilizes the necessary flow of authority from top to bottom as in the military or line type and also utilizes the advice coming from the experts at the heads of the departments. The discussion and charts present a picture of the three main types of organization now most in use in this country. However, it would be difficult to find a big plant organ-



ization carried on exactly as these charts show. One rather would find individual modifications and combinations of them, suited to the peculiar conditions and processes of each concern.

### 5. *Scientific Management*

With the increase in the division of labor and the enlargement of industrial enterprises, there has been, in a large number of cases, a definite decline in the efficiency of the work done. It was in the eighties that Frederick Winslow Taylor, then Chief Engineer for the Midvale Steel Company, appreciating this situation, made definite attempts to find corrective measures for the decline in labor's efficiency. He applied his really great inventive ability to the problem, and after several years of study and experimentation, presented to the world some rather definite conclusions. These formulated principles have come to be known as "The Taylor System" and from it, there has emerged gradually a new and flexible science of management.

In general, Taylor's investigations followed two main lines, one relating to the machine, the tool, and the material (metal cutting); the other to the workman's methods of handling the machine, the tool, and the material (time and motion study). Since Taylor's time, too, many notable contributions have been made in this new field by H. L. Gantt, Harrington Emerson, and other men.

Scientific management might be characterized as a *form of organization for the purpose of best utilizing the efforts of employers and employees through processes resting upon scientific investigation and analysis*. It aims at the elimination of avoidable wastes, improvements of the methods and processes of production and a more scientific distribution of the product. Developments



In general, Taylor's investigations followed two main lines, one relating to the machine, the tool, and the material; the other to the workman's methods of handling the machine, the tool, and the material. (Photo Hine)

have been so varied and fruitful that it is rather hard to limit the term *scientific management* at present by any rigid set of definitions. There are, however, some rather definite contributions which it has made towards the great problem of increasing production. The more important ones have been summarized by H. H. Farquhar.<sup>1</sup>

1. The more effective utilization of equipment through the use of carefully kept records and charts of individual machine records.

2. More effective use of labor through scientific man and job analyses.

3. Strict regulation of materials through simplification and standardization and through methods of control of material-activities.

4. More accurate routing including both the physical and the administrative control for work in process.

5. The regulation of industry.

What scientific management has done for the more efficient operation of the plant is perhaps one of the most important phases of its whole development. Speaking largely this amounts to furnishing better mechanisms for a more completely centralized control. Under scientific management plant operations are routed, mapped and scheduled until management is no longer haphazard but works with a certain precision toward the attainment of a planned purpose.

Scientific management, in its development, has encountered some very bitter opposition. Labor in general, and in particular the American Federation of Labor, has charged, and rightly in many instances, that scientific management is only another scheme to divest the worker of his one remaining advantage, the knowledge of his trade. It is further charged that it is a scheme to speed up the worker in order to increase production without proper financial compensations; and it is well enough authenticated that, under the guise of scientific management, many firms maliciously or ignorantly have, in the past, made use of time studies and job analyses for such purposes. This was a passing phase, however. Now, as a result of the growing realization of the genuine greatness of scientific management there seems to be a decline in the antagonism of organized labor. Realization is creeping in that increased production can work for the benefit of labor too, if it can be assured that the fruits of this increase will be properly shared. It is not

<sup>1</sup> In the Bulletin of the Taylor Society, Feb., 1924, Vol. 9, No. 1.

the mechanism of scientific management but its abuse that is to blame for its occasional unfairness to workers. The experiments now being carried out in the shops of the Baltimore and Ohio Railroad are an example of this fact. Here the workers have agreed to adopt scientific management in the shop provided that they are allowed a share in what benefits may accrue from the increase in efficiency. It might be pointed out here that while



In the desire to speed up production, efficiency experts have devised all manner of mechanisms. This picture shows automobile radiators carried on an endless belt. (Courtesy Ford Motor Co.)

scientific management has in the past been very largely associated with the Taylor System itself, it is at present a movement far more comprehensive than was first detailed by Mr. Taylor. Scientific management, like many new movements, has swung back and forth from one extreme to the other but is now settling down on a firm foundation of theory and practice. We may in the future expect much from it in the way of solutions for the problems of increasing production.

## 6. *Personnel Administration*

Humanity as contrasted with materials is a great modern consideration in industry. Labor has often come to mean, in the minds of industrialists, more or less a commodity to be bought in the open market, very much as they buy their coal and other materials. This has come about in large part from the increase in the size of industrial plants, and the lack of personal contact between owner or manager and the workers. With the growth of these



An employment office of the type which charges a fee for placing men; it is neither a public agency nor one which is connected with employing firms. The replacement of such offices by public ones is a much needed reform. (Photo Hine)

impersonal relations between management and workers, there has been felt the need for some method which would bridge over this growing gulf. Much of the unrest among workers, at present, is certainly traceable to this cause. The desire to remedy this situation on the part

of certain managers who would like to reestablish something like the old relationships and who feel that at least they ought to try to see the plant and its operations through the eyes of the workers, has led to the development of a department to care for the personal side of the business. This department has come to be known as the "Personnel Department" and its head as the "personnel manager."

Just what the Personnel Department is and what its duties are is indefinite as yet. It varies according to the firm studied. The general divisions are usually: Employment, Health and Safety, Education, Research, Service, Adjustment and Joint Relations.

It is the duty of that part of the Personnel Department intrusted with employment to supply the management with general information concerning the labor market and the source of supply. As a rule, this division has control of wages paid, the hours of

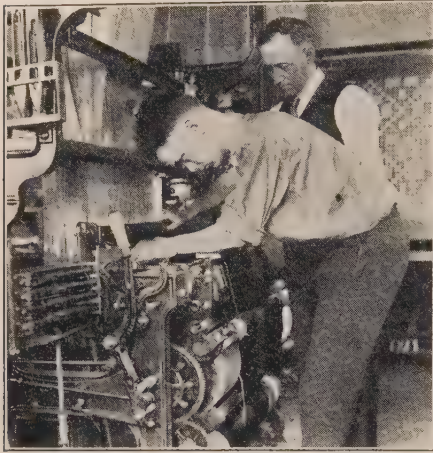


work, and other terms of employment. A very interesting technique has been built up by personnel managers in the selection of the working force. With the aid of psychological tests of one sort or another, and of personal interviews, they are endeavoring to place the applicant in that part of the process where he will best fit. In most cases, careful studies have been made of most of the major occupations in the plant, and the placing expert is aided in his task by having at his disposal accurate analyses of the jobs to be filled.

In many of the older plants the man who did not fit into the particular job at which he found himself was fired. Most Personnel Departments having jurisdiction over the discharge are endeavoring to place the man who otherwise would be discharged in some other department of the plant. For example, under the old system, when a man who might be large physically came in looking for work, the employment manager would, in all probability assign him to a task requiring great physical strength. Trade tests and interviews, however, often show that this man is much better fitted to work in some other department not necessarily requiring physical strength. Another important work usually done by the Personnel Department is to introduce the new worker to his job. This consists, perhaps, in briefly telling the man the nature of the work of the department in which he is to function, showing him the particular place where he will work and, in general, endeavoring to create a feeling of good will. Other illustrations might be adduced of what the work of this part of personnel administration is. But as we have already said, the general scope of any such department will depend largely on the plant and the general scheme of its management. Further specific illustration is perhaps then unnecessary.

It is easily understood that there might be much of value to be contributed by the personnel experts in the various tasks of looking after the health and safety of the workers, and in the working out of educational schemes for the training of executives, foremen, and even of workers for particular tasks. There is a constant demand for facts on better administration and better relations. If the organization be large enough this work is often done by a special group devoting itself to problems such as fatigue studies, time and motion studies, trade tests, and in general the

problems associating themselves with personal relations and individual and group effectiveness in industry.



A trade school connected with one of the large silk mills. The student is learning to operate a Jacquard loom. (Photo Hine)

There are, of course, certain fundamental points of relationship between management and employee upon which any Personnel Department must base its program. In general, these are relationships having to do with the security of employment, hours, wages, and working conditions. Any scheme which will help build up morale is surely within the jurisdiction of the same group of experts, since the governing principle is that a raised morale has to rest upon

understanding and appreciation of the worker as an individual with a personality.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What influence has science had upon plant location? Why is power such an important factor in the location of the plant? What influence is electric power having upon plant location?
2. Account for the location of some of the industries listed in the table on page 268. List the factors in what seems to you their order of importance.
3. Well planned factories, where layout and routing are adapted to the nature of the product and the process, should be more productive than factories organized at haphazard. Point out some of the specific reasons why this is true.
4. What influence will the type of management used have upon the productivity of the plant? Explain.
5. Is it correct to say that the functionalized type of control is an application of division of labor to management? Explain.
6. Is the existence of the Personnel Department justified on economic grounds? Could the Personnel Department help raise the general level of production of a plant? How?

## CHAPTER 15

### THE TECHNIQUE OF BUSINESS

#### 1. *The Business Side of a Corporate Manufacturing Business*

As we have already said, there is a distinction to be made between the technological and the business sides of industry. The technological factors have already received some discussion. It remains to consider briefly the problems that we have called, for our purposes here, business problems. These are quite separate and distinct from problems of the operation of the plant. They include, very largely, the problems that have to do with the functioning of the business in the price system; for it must be kept in mind always that goods not only have to be produced, but have to meet the demands of a certain market; and further also, that the market is one in which a price has to be made. As a consequence there is always in the backs of the minds of the managers of business this consideration. In spite of the quality of the goods or the efficiency of the producing organization, there may be difficulties in the market that are insoluble by any kind of attention executives may give to the producing organization. The pressure of price is an everpresent force in the life of business.

It is usual in a modern firm because of this to have quite as great attention paid to this problem as to the technological problems of production. Some one within the firm has to specialize in estimating the probable demand for the product that is manufactured, with reference always to probable competition in supplying it and to the price that may be obtained. This is not so true, of course, if the business possesses a monopoly of the market. For then it has only to arrange its production so as to secure the maximum net returns. It has much more freedom from price pressure because it has no worries concerning possible reductions by its competitors. But there is always the question of potential competition, for it is always thinkable that if prices

are kept on a high enough level, there will be found some one who will come into the business and make and sell the goods at a cheaper price.

If the firm, has, however, no monopoly and must enter into competition, the person who is responsible for the relations of the business to the market not only has to figure out what the general demand is for the product, but has also to estimate that part of the demand which will come to his particular organization. And this, of course, depends to a very large extent upon the price at which the goods can be sold. For if some other firm can sell them cheaper it will get a proportionately larger share of the market. This may have a greater effect than at once appears, because, with our highly developed plants for manufacturing, overhead expenses are very great, and they are very nearly as great whether the product that is turned out is large or small. Machines and factories depreciate at about the same rate, whether they are used or idle. Consequently a small reduction in the amount of product may mean the difference, in such a business, between success and failure. There is a very great responsibility, therefore, devolving upon the individual of the firm whose business it is to care for these matters.

But this is not the most important part of his problem. Not only has he to keep an eye upon his competitors or upon the possibility of new competitors coming into the market if he charges too high a price; he has also continually to estimate the probable movement of the general level of all prices and the relation to this level of the prices involved in his own specific business planning. For, if the general movement of prices is upward, he cannot afford to have the prices at which he sells his product remain constant. They must go up too, or else the firm's income will be found in time to be less than the necessary outlays. This is a matter of very great importance in a social system whose prices change as rapidly as do ours, moving now up and now down, and on the whole being extremely variable.

In spite of these factors of uncertainty, some individual or some group of individuals in the firm is forced to make comprehensive plans that extend for some distance into the future. This is, of course, because business operations involve very large and extended movements of masses of raw materials throughout the



whole civilized world. From beginning to end they cover also a great range in time. A firm cannot make rubber tires from rubber that has not yet been extracted from trees; and it cannot expect to have rubber from those trees if they have not yet been planted. This necessity for forethought and long-range planning is generally present in most large industrial establishments. In order to provide for their future needs firms have to make buying contracts a good way ahead and yet they find themselves at the



The increase in the complexity of executive control demands a host of efficiency devices. This is a picture of the central filing department of the Federal Reserve Bank at Cleveland. (Courtesy Library Bureau)

mercy of possible fluctuations in the selling price upon very short notice. In order to sail successfully between this Scylla and Charybdis most big business firms have adopted the most scientific methods for budgetary control and comprehensive planning which their great corps of technicians and statisticians can devise. In their attempts to look far ahead they use every statistical device known for the analysis of the market and its likely future trends. And for the probable course of production in the future they call upon their best technicians for advice as to technical developments. On the basis of these analyses of the probable supplies of and demands for their product they make up a scheme of operation to which they hope to be able to hold at least roughly. In spite, however, of their best efforts, there are many elements of uncertainty and extreme liability of error.

They are well enough aware of this and make the greatest efforts to control both the supplies of and the demands for their product. One of the most spectacular of these efforts in recent years has been the development of sales management and particularly, of course, of advertising.

1923 ADVERTISING EXPENDITURES <sup>1</sup>

	In Newspapers (See Note 1)	In 30 Leading Magazines (See Note 2)
American Tobacco Co. ....	\$1,700,000	\$ 242,981
Lever Bros. Co. ....	1,500,000	664,795
Standard Oil Co. (Indiana)....	1,500,000	.....
Victor Talking Machine Co. ....	1,500,000	1,142,055
Calumet Baking Powder Co. ....	1,200,000	.....
Dodge Brothers. ....	1,200,000	493,810
United States Rubber Co. ....	1,100,000	265,250
Literary Digest. ....	1,080,000	651
Liggett & Myers Tobacco Co. ....	1,000,000	150,620
Wm. Wrigley, Jr., Co. ....	1,000,000	.....
Corn Products Refining Co. ....	900,000	.....
Pepsodent Co. ....	800,000	597,159

NOTE 1. Estimates compiled by the Bureau of Advertising of the American Newspaper Publishers' Association after extensive investigation.

NOTE 2. Estimates compiled by the Crowell Publishing Company, including all space in these periodicals: *American Magazine*, *Atlantic*, *Delineator*, *Designer*, *Century*, *Christian Herald*, *Collier's*, *Cosmopolitan*, *Good Housekeeping*, *Harper's*, *Harper's Bazar*, *Hearst's*, *Ladies' Home Journal*, *Life*, *Literary Digest*, *McCall's*, *McClure's*, *Modern Priscilla*, *National Geographic*, *Outlook*, *People's Home Journal*, *Pictorial Review*, *Red Book*, *Review of Reviews*, *Saturday Evening Post*, *Scribner's*, *Vanity Fair*, *Vogue*, *Woman's Home Companion*, *Woman's World*, *World's Work*.

One cannot pick up a newspaper or a magazine without becoming aware of the enormous sums that are expended upon the attempt to control the demand for product. Some witty person has said that modern industry creates its product in one part of its plant and the demand for it in another part, and there is an element of truth in the saying which illuminates the whole problem faced by the modern business executive.

If it were only necessary for him to so manage his plant as to keep the materials going into it in the proper order, to keep the machines running at coördinate speeds, and to turn out the product in the greatest possible quantities, his problem would be a comparatively simple one. But, as we have tried to explain, it

<sup>1</sup> *The New York Times*, December 16, 1924.

is not so simple as this. He has continually to face these other problems, which may upset his best laid plans for production. And we must again insist just here, that, although a system which has these irregularities and uncertainties looks like a more or less crazy system to the observer from without, it is the fault of no individual but of the haphazard growth of the system itself. The individual who enters the business world must take its conditions as he finds them. He cannot escape the problems connected with



A night scene on Broadway. One of the forms of modern advertising. Would the municipality of Paris permit such a development? Why not? (Photo Ewing Galloway)

the business side of productive effort any more than he can successfully neglect the problems of the technique of production.

We shall, a little later, go into some of the problems that are raised, such as the devising of adequate means for the forecasting of the possible supplies of the raw materials upon which the manufacturing industry must depend, and into the problems involved in the control and management of the sales department. Both of these have had very extensive development in modern businesses, different of course for different businesses because some are more engaged in selling than in buying and some are more engaged in buying than in selling. The manufacturing business, however, has to pay almost equal attention to both its buying and its selling activities and it will therefore generally be found to

maintain separate departments for each of these. The producing department and the sales department, in a chart of the activities of the firm, would have to have almost coördinate treatment and each one of them would be found to have an organization built up to carry on the various activities that are involved in each of these departments.

Not only is the business executive, however, faced with the task of organizing the technical side of his business and of successfully managing its business side; he is also faced with certain problems of the general control and operation of capital in the corporate form. And for the purpose of obtaining a somewhat better understanding of this problem, it will perhaps be necessary to analyze it at some length.

## *2. The General Control of Operation and Capital Under the Corporate Form*

There are first to be considered the heads of the technical production and business staffs who are responsible to the board of directors of the corporation. These and their problems we have already mentioned and perhaps enough has been said to indicate the seriousness of the problems they face. But we have not indicated another fact of considerable importance: that somehow the heads of these technical-productive and business staffs have to maintain relationships with the board of directors of the corporation, which represents the stockholders. And needless to say, these relationships are often of a very delicate nature. No general description of the means by which friction is avoided can be at all adequate. To maintain a good understanding between a board of directors which is interested primarily in the profits of the business and the executives who are interested mainly in the smooth functioning of the operating division of the business, is no easily settled general problem, for these relationships depend upon the inner variations of organization that differ very greatly from firm to firm. It may be that the head of one of the staffs or of both of them is a large shareholder and is also a director of the business. Where this is true, he is perhaps in a position to dominate the whole policy of the concern; but this is less apt to be true as the business ages and as its shares get out of the hands of the few original organizers and become widely scattered.



In time there comes to be a situation in which the shareholders and, consequently, the directors, are quite distinctly separated from those who are responsible for the operation of the business. This situation may have rather serious social consequences. It is the problem that Professor Veblen has referred to in his *Absentee Ownership*. And it is certainly possible that the divorce of ownership from management may result in serious inefficiencies and much withholding of effort. This might thinkably go so far as to cause a breakdown in the whole industrial system.

Perhaps this whole problem will become somewhat clearer by describing the function of these directors a little more fully. They are elected by the stockholders of the corporation, who are themselves the ultimate owners; and, under the laws of most of our states, must be selected from among the stockholders. Directors are, therefore, usually also part-owners, though they may not be large holders of stock. The directors of a corporation meet rather frequently: usually about once a month or once in two months. They decide upon matters of general policy, such as the extension of operations, the establishment of general financial relationships, the reorganization of the operating executives and the like; but they are, of course, not in a position to know anything about the problems which actually face the executives; and they are dependent upon them for their knowledge of the efficiency with which the business is functioning. The only test they have really is whether or not the business is able to pay dividends. Dividends represent the margin by which income exceeds expenditures,<sup>1</sup> and there is unquestionably a tendency for directors to become less and less interested in the details of operation and more and more insistent upon the maintenance of dividends. For this reason there may arise a deep difference of opinion between directors and operating officials, the directors asking for dividends at any cost and the operating officials asking for continuous operation and smooth functioning at any cost, even that of the sacrifice of dividends.

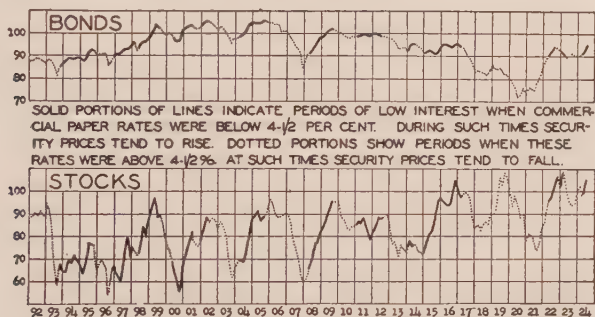
If this lack of interest in the problems of operation which are the aspect of industry that is of social interest, is true of directors, it is even more true of stockholders, who, as a rule, meet only once

<sup>1</sup> Some income may not be paid as dividends immediately but may be passed to surplus and reinvested in the business.

a year for what is known as the annual stockholders' meeting and who there discuss the report of the board of directors for the year. Stockholders are usually ill informed concerning the problems of the business, and, it must be admitted, usually very little interested. If directors are concerned largely with dividends, stockholders may be said to be concerned almost solely with the maintenance of dividends. This is so true that there has grown up a significant prevalence of proxy voting in stockholders' meetings. By means of these proxies the directors are able to secure a control of policy which is almost absolute and it is by this means that some more active individual in the board of directors may find it possible to establish the policies in which he is, for some reason, particularly interested, and to maintain this control over very long periods of time. This often results in the control of manufacturing corporations, for instance, by financial houses who are interested more in the exploitation of the corporation for their own purposes than in the maintaining of the interests either of the stockholders or of the operating force. There has been a good deal of talk in recent years about the growing power of financiers in our economic system; and here is one of the actual means which are employed for this purpose. It is a fact that on most of the boards of directors of industrial corporations there is a representative of the bank which handles most of the financial problems of the corporation. By means of the proxy it is relatively easy for this individual to so manage the corporation's affairs as to favor the bank, even at the expense of the corporation itself.

This of course may not be true; but it may be true that some operating official, say the general manager of the business, is also a member of the board of directors and is interested more than any other single individual in the conduct of the firm's affairs. He also may find it desirable to control by the proxy. This is perhaps a more favorable circumstance, because it is well to have the formation of policy in the hands of the actual operating officials of the business; but it often happens that there is a more or less submerged warfare between the financial representative and the representative of the operating officials on the board of directors; and this may lead, in turn, and as a matter of fact often does lead, to confusion and to a hesitating and procrastinating policy on the part of the firm which is disastrous to operating efficiency.

We perhaps ought to say something concerning the various forms of shares of stock to which the development of the corporation has given rise and by the control of which the actual control of the business is gained. Corporate securities are of two general types, stocks and bonds. The corporation just being organized or in need of additional funds may issue both of these types of securities for the purpose of obtaining additional capital. The share of stock represents actual ownership in the business. The



This chart shows that stocks and bonds are handled separately. It will be seen that the prices of stocks are less stable than those of bonds—also that corporate policy with respect to their issuance has to be governed by many considerations. The correlation between high and low interest rates and the prices of stocks and bonds is shown here. Many banks issue such information periodically. (From the *Business Bulletin*, Cleveland Trust Company, Aug. 15, 1924)

bond represents a loan made to the business. The stockholders therefore are the owners of the business, and the bondholders are its creditors. The questions of policy involved in the issuance of stocks or of bonds are usually settled by the promoters of the business or, if the business is a going one, by the financial representatives of the business. If there is a desire not to extend the ownership shares of the business, then there will be the issuance of bonds rather than stocks, provided it is found possible to sell them; and in order to make their sale more ready than it might perhaps otherwise be, there is established for them a fixed rate of return which is not a feature of the common stock of a business. The rate of return for common stock is naturally dependent upon the earnings of the business. The payment of the bondholders is made as a first charge upon gross earnings; the payment of the stock-

holders' dividends is only made after all other expenses have been met.

Distinction ought perhaps to be made, for our purposes here, only between two classes of stock. There are many others, but these perhaps do not require discussion in so brief a treatment as we can give the whole matter here. There are, (1) common stock, and (2) preferred stock. Both represent shares of ownership; but one carries a dividend which is paid before there is any payment to the other shareholders. This is, of course, preferred stock, which, as its name indicates, entitles its owner to a preference in the sharing of the profits of the company. Common stockholders are paid only out of the earnings of the business after the bondholders have been paid their fixed rate of return and the preferred shareholders have been paid their dividends.

It will be seen that in the very nature of the intricate structure of modern business there are the roots of most pressing social problems which will somehow have to be met in the future. One of these very grave social problems, which is closely associated with the structure and organization of the business system itself, is the growing demand of the workers for a share in the control of the business, for, as might have been expected in a world which is distinguished by the raising of the levels of living, by the growth of political democracy, and by the freeing of the intelligence and abilities of its individuals, people have not remained content with a system of ownership and operation of the industrial system which is essentially autocratic. Workers are demanding not only that they be given a vote for their political representatives who manage the government, but also that they be given a vote for their industrial representatives who manage the businesses to which they are so much more intimately related. This problem will be more extensively discussed in a later chapter, but just here we will point out that the characteristic form which this demand of workers for a share in control is taking, in the American system at least, is an insistence upon owning shares of stock and upon being represented upon the boards of directors. And it must be said that if this movement reaches the proportions which indications of the present seem to point to, it may be that many of the problems of absentee ownership will be solved by it, for if the ownership of industry is taken out of the hands of those who have



no interest in its operating problems and placed in the hands of those to whom these problems are the most vital things in life, it may be expected that the withholding of effort which is so serious a drawback in industry at the present time, will be obviated, at least to a certain extent, and that the confusion of policy resulting from conflicts between the various interests represented on the board of directors may be resolved in favor of directing the operation of industry to the two main needs of production, which we have indicated here as first that of securing greater product and second that of making production activities more satisfying and beneficial to those who are engaged in them.

### 3. *The Technique of Business Forecasting*

The directors of the technical side of corporate manufacturing have been much ahead of those concerned with the business side in utilizing the tools, devices, and methods capable of supplementing their own efforts. The directors of production are constantly utilizing the devices of the laboratory to control and forecast. In the manufacture of Portland cement, samples of the raw materials are regularly taken and analyzed in order that a proper mixture may be maintained.



Charts for executives. Graphic records of stocks of raw materials, sales, production, etc., are of great assistance in business control and forecasting. (Courtesy Educational Exhibition Co.)

Temperatures in the roasting ovens must constantly be watched if a uniform product is to be produced. This is only one example of how the whole process of manufacturing is dependent upon laboratory control.

There is an awakening to the possibility of control and forecasting as applied to the business side of the manufacturing process. The new business laboratory presents a somewhat

different aspect from that of the laboratory of the manufacturing plant; nevertheless, it is a laboratory. In place of test tubes and microscopes we find machines for eliminating the old hand methods of calculating, many of them electrically driven. Typewriters of various sorts perform a wide range of duties, faster and better than was formerly done by hand. We find the accountant and the statistician instead of the chemist and physicist, investigating, testing, and formulating. Charts and graphs present visually in a more readily accessible form the results of analyses of the accountant and statistician.

The main problem from the viewpoint of the business director is obtaining as large a profit as is possible with the factors at his disposal. This, first of all, necessitates the estimation of the demand for his product. Besides being able to forecast or estimate probable demand he is confronted with the task of buying raw materials at lowest prices and in proper amounts to insure the product to supply the above demand. Whether it be purchasing raw materials, bargaining with labor, determining sales policies, or other phases of control, there is one factor constantly presenting itself, and that is the estimation of the probable movement of price levels.

Adopting the terminology of the statistician we may say that what the business director needs is a thermometer and a barometer of business conditions. If these be sufficiently accurate and sensitive, it will then be possible to know more of price movements and consequently effect a greater control over all policies touching the profits of the business. The terms themselves suggest their meaning; business thermometers record the present conditions of business; business barometers forecast future movements. Statisticians and economists differ as to the best barometer, but all agree that it must represent the interrelations of the processes of business and industry. For example, pig iron enters either directly or indirectly into almost every product on the market today—either as part of the product or as part of the machinery for making the product. Pig iron should, then, be a crude indicator of business movements. It would surely be a thermometer and in some cases a barometer.

However, as Mr. Jordan suggests in his *Business Forecasting*: "No single barometer can be accepted as definitely indicative

of coming events. The 'shadow which is cast before' must be sought in diverse developments rather than through one factor alone."<sup>1</sup>

There are on the market at the present time several barometers which endeavor to indicate to the business man what changes lie ahead in price levels. As price levels and the business cycle are closely linked, the constructors of these barometers must recognize the importance of the cycle.<sup>2</sup> The Harvard business index, published in the *Review of Economic Statistics*, is one of the several barometers now available to the business man. This index consists of several important economic series, such as pig-iron production, interest rates, and commodity prices, analyzed and subjected to many statistical requirements in an attempt to determine the cycles of the various series. An analysis of these cycles showed that certain ones exhibited a tendency to fluctuate simultaneously. Grouping according to this tendency resulted in the following series:

A. The *speculative group*, consisting of (1) New York City bank debits; (2) prices of industrial stocks.

B. The *business group*, consisting of (3) bank debits for 140 cities outside New York City; (4) commodity prices.

C. The *banking group*, consisting of (5) rates on 4-6 months paper; (6) rates on 60-90 day paper.

The barometric value of these index numbers lies in the fact that between each group there is a more or less regular lag in time. In the period studied, the major movements of speculation preceded those of business by four to ten months, and the movements of business preceded those of banking by two to eight months. The sequence of movements holding for upward swings and crests also held for downward swings and troughs.<sup>3</sup>

Thus it is thought that a rise in the speculative curve forecasts a rise in the business curve and a rise in the business curve anticipates a rise in the banking curve.

Besides barometers such as the one just mentioned, and the Brookmire Economic Service, the "Babson Chart" and others, there are such publications as the *Survey of Current Business*,

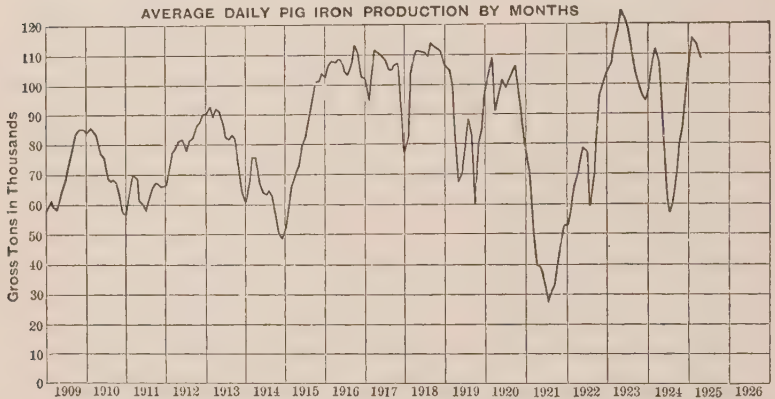
<sup>1</sup> Jordan, D. F., *Business Forecasting*.

<sup>2</sup> We are here anticipating the discussion of the "business cycle" in the next chapter.

<sup>3</sup> The Harvard *Review of Economic Statistics*, 1921.

of the United States Department of Commerce, and the *Standard Daily Trade Service*, which aim to furnish the executive with summaries of current business conditions.

Numerous examples well illustrate what can be done by the formulated attempts to analyze and control. The Dennison Manufacturing Company has successfully followed a scheme of directing manufacturing and business activities according to judgments based on past experiences and the outlook for the future.



Activity in the pig iron industry is usually felt to indicate coming activity in general business. It is one of the important single barometers of business. A chart such as this, kept up to date, ought to have forecasting value for any executive who has to plan ahead.

The experience of the American Radiator Company in lessening trade depressions is an excellent example of what may be done along the lines of conscious control. Mr. Woolley, president of the company, explains how they succeeded in doing this:

"During the last twenty years the American Radiator Company has weathered several periods of business depression and one severe panic—1907—and in the midst of the present depression is having the biggest full season in its history. Its growth has been constant. We attribute these results in principal measure to our having consciously operated under the principles of the business cycle. We chart business and financial conditions, keep our charts up to date, and make plans and conduct our



business according to the situation as shown by interpretations of these charts.

"Let me illustrate by examples.

"To go back to the beginning, we first became interested in the theory of the business cycle after the panic of 1893. Study convinced us that it was more than a theory. It was a fact. We noted the technique of the Marshall Fields, Andrew Carnegies and others who did their big building immediately following panics. Our company slowly developed a scheme of working under the principles of the business cycle, and by 1899 we had put into effect a system of charting from the available statistics of business and financial movements.

"Pig iron is one of the chief elements of our finished product. In August, 1907, our charts showed us that the price of pig iron had risen from a low point of approximately \$10 a ton in 1904 to a little over \$26 a ton. Interest rates had also risen to a prohibitive point and the general price structure was up in the clouds.

"At a meeting of our board of directors August 2, 1907, we took account of these facts that our charts showed us so graphically and decided that we would set our house in order for the coming storm. For it was plain to us from our charts that inflation had gone to such an extent that a panic was imminent. The banking system of that period, lacking the essential element of elasticity, was rapidly reaching the breaking point. It was obvious that the credit burden was soon to become disproportionate to the ability of that system to stand the strain.

"We proceeded immediately to liquidate our inventories, cut down production, pay our debts and buy only on a day-to-day basis. The panic came in October, three months after we had been able to predict it. The end of the year found us with our debts paid and our inventories relieved of the load of high cost material. We not only came through the storm, but we were ready to take advantage of the first signs of revival and to help the revival along. And if the number of business concerns employing this method of stabilization can be increased, it will check the dangerous peak of supposed prosperity and lessen the tragic dip into depression.

"After the 1907 panic, pig iron went down to \$14 a ton and remained substantially at that figure until early in 1915. The war had come on in the meantime, bringing depression with it. People were saying that the depression would last indefinitely, at least for the period of the war. The iron and steel business was especially hard hit. But our charts showed us that, although the price of pig iron remained stationary, production was increasing. In other words, in the face of the pessimistic prophecies the demand was growing.

"We decided that then was the time to buy pig iron. In February, 1915, we converted a large part of our cash reserves into a pig iron reserve. We bought pig iron and stored it. Two weeks after we had made our contracts the price of pig iron jumped fifty cents a ton, and from then on it advanced steadily until it reached \$55 a ton. We bought in the market for our day-to-day needs, only nibbling at our reserves, until the price reached \$44 a ton, when we began using our reserve stock.

"When America entered the war and the Government controlled commodity prices pig iron went back to \$33 a ton, where it stood when Government control ended. After the Government ceased price control pig iron went down to \$26.75, and then up again until it stood at the general level of \$46 a ton in July, 1920. We knew of instances in which bonuses brought the price up to \$56 a ton, but our charts showed the general level of \$46 a ton. At the same time we saw interest rates at  $8\frac{1}{2}$ , 9, and 10 per cent and prices generally greatly inflated.

"Once more our directors decided that depression was in sight. Once more we liquidated our inventories, paid our debts, cut down production, and got ready for the storm. We had come, by experience which brought understanding, to place implicit reliance upon our ability accurately to forecast the logical trend of finance and business by skillful interpretations of our economic charts. The business cycle was no longer a theory. It became for us a veritable compass to guide us through the gathering mists of depression.

"Now we come to 1921. At the beginning of this year our charts showed us a large increase in the number of building permits issued. Detailed statistics showed that the vast majority of those permits was for small houses. Other charts showed the prices

of building materials declining. At the same time interest rates were coming down.

"We decided that it was to be a moderately prosperous year for us. It was time for us to expand. We made a satisfactory adjustment of wages with our workmen, opened up our factories, increased production, made a big reduction in selling prices, and while the first six months were below normal, the last half will be the largest of record. Our order books are now crowded with unfilled orders, giving the necessary back log for uninterrupted production throughout the winter."<sup>1</sup>

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Explain the term "business" as used in the title of Division 1, Chapter 15. What does it include?
2. What has demand to do with the output of the product? What methods are used by businesses to enlarge demand?
3. Is there any social waste involved in advertising?
4. Explain the control of corporate forms of business enterprise. How is it possible for a minority group to exploit a concern for its own purposes? Is "absentee ownership" very prevalent in this country?
5. How does a bond differ from a stock?
6. What is forecasting? Explain its use to the business manager.

<sup>1</sup> "The Business Cycle," *New York Evening Post*, pamphlet, 1921.

## CHAPTER 16

### INDUSTRIAL COÖRDINATION AND CONTROL

#### 1. *The Coördination of Businesses and Industries*

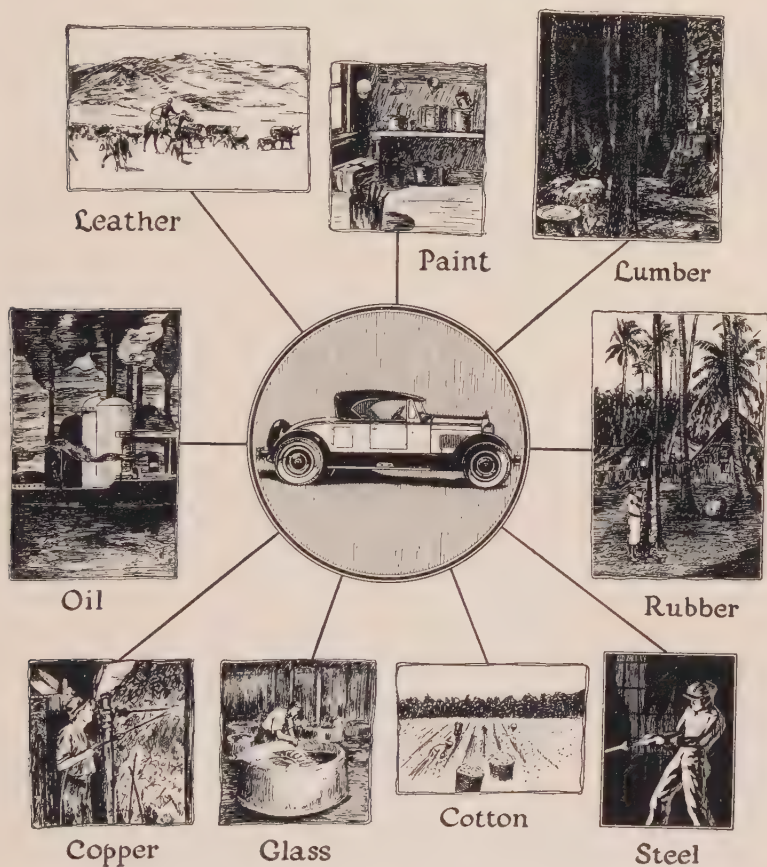
The coördination of industrial groups is one of the most serious problems presented by the complex relationships that have grown up in modern industry. Briefly, it is the problem of establishing workable relationships among businesses of the same industry and among different industries. We have already mentioned the need of coördination along with individual specialization in the factory. But businesses have to work out some kind of plan for coördination of their efforts or else they will be in continual danger of either surplus or shortage and consequently of interruption of operation and failure to supply the goods that are expected of them. Industries also, as well as the individuals of business and businesses themselves, must maintain similar workable relationships if they are to function as a part of a social system that is responsible for furnishing to the world the goods and services that form the material basis of life.

The growers of wool, the makers of yarns, the weavers of cloth, and the makers of clothes cannot escape from the relationships they bear to each other. They can, however, fail to maintain these relationships in workable order and to keep flowing the line of commodities that begins with the growing of wool and ends with the wearing of clothes. Each unit in the sequence is dependent upon the functioning of the units that go before and those that come after; and none can operate without the others. If this relationship could be maintained with some exactness a great gain from the social point of view might be made in the efficiency of the whole industry.

The problem is again one of those which are made more complicated and difficult of solution by the fact that hardly any industry is a united whole under one ownership and with one management. There are often, though not always in our era of combination,



many different and entirely separate firms performing each one of the operations of the industry, from the growing of wool to the final shaping of the cloth into clothes. There is, therefore, not



Many industries and processes contribute to the manufacture of the automobile. This composite picture emphasizes only the major industries which contribute directly to its manufacture. Their proper coördination is one of the gravest problems of the industrial system.

the problem of one great wool grower supplying one great weaver of cloth, and one great weaver of cloth supplying one great maker of clothes. It is not so simple as that. There are a multitude of growers of wool scattered all over the world. There are fewer

but yet very many makers of yarn. There are perhaps still fewer but yet many weavers of cloth. And we know, of course, that there are a large number of firms in the business of making clothes. The fact that these firms are separate makes the problem of coördination one of such a complicated nature as to appear almost insoluble under the present form of industrial organization. The grower of wool may sell his wool to any one of the makers of yarn, and any one of the makers of yarn may sell to any one of the weavers of cloth, and similarly, any one of the weavers of cloth may sell to any one of the makers of clothes.

There is no running survey of the amount of wool, the amount of yarns, the amount of cloth, and the amount of clothes; and there is no way of determining how much of the business shall be done by this firm or that firm or another firm. So that, at best, when an industry proceeds on a competitive basis, there exists only a kind of haphazard approximation of coördination, achieved by very crude trial and error methods, which often results in shortages and quite as often in surpluses. Of course such a description as this somewhat exaggerates the actual condition of affairs in almost any industry; but it is just because of these dangers of uncontrolled production and sale that so many agencies have been built up for mutual interchange of the information out of which coördination eventually comes. What is necessary to see just here is that without these understandings, which we shall discuss a little later, industry would be simply chaos.

It is only less important that different industries should have some definitely workable relationships established among them. Each industry has not only to maintain some kind of stability within its own structure; it has also to maintain co-relations with other industries, such, for instance, as the steel industry, for wool cannot become clothes without the assistance of machines which are made of steel. As a matter of fact, it cannot become clothes without the assistance of coal, which creates power, and cotton, from which thread is made, and even many products of other industries, which would at first seem to bear scarcely any relationship to wool, such, for instance, as the oil which furnishes the lubrication without which the machines would grind themselves to bits from friction. There simply has to be some rough way, at least, of beginning the operations that are to merge finally

in a finished product after what may be months or even years of preparation. Without some machinery for coördination, industrial life with the mechanisms of the present and with its present complications and interrelationships would be simply unthinkable.

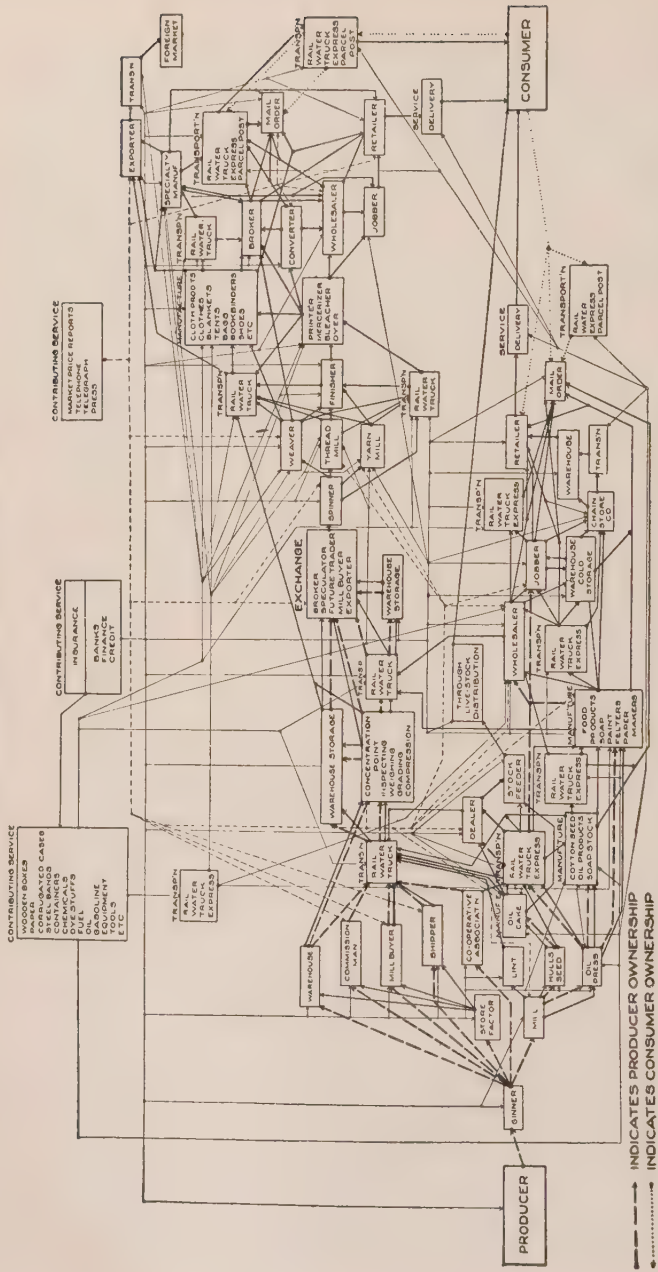
## *2. Coördination Accomplished Largely by the Middleman-Marketing System*

The earliest systems of sale were direct. The person who wanted something went to the person who had it and exchanged something that happened, in turn, to be wanted by the other person. This "double coincidence of demand," as it has been called, happened too seldom to make such a system workable when the kinds of goods exchanged in organized markets were increased in number beyond the most primitive necessities of life. The early systems of barter and of direct sale have been superseded gradually by a system of market mechanisms and middlemen which we see are necessary to the operation of our complicated roundabout productive processes and which take the place of the old direct contacts between the producer and the consumer.

In a very real sense of the word, the whole complicated middleman structure, ranging all the way from the single individual who buys and sells, to the great organized markets where goods—or the titles to them—are exchanged, is maintained for the purpose of keeping the makers of goods in touch with the users of them. That is to say that the fundamental function of the whole marketing system is to perform the bargaining activity that was once performed by the contact of mind with mind that ensued upon the meeting of the man who had something to sell with the man who wanted it.

We have always to remember in discussing this middleman-marketing system that the individuals who engage in it work, like any one else in the business world, for profit. They are specialists in buying and selling. It is their business to buy in a cheap market and to sell in a dear one, and the difference between the cheapness of the one market and the dearness of the other is the margin in which they are interested. A very great part of their activity, therefore, is directed to the anticipation of expected changes in the course of prices. They make it their business to guess what will happen to the prices of specific commodities at some future time

## DISTRIBUTION OF COTTON AND COTTON PRODUCTS



This diagram should make more clear the expression "coördinating function of the middleman." The question arises: is there one middleman, or are there many? How is so complex a system ever to be brought under social control? (From Report of Joint Committee of Agricultural Inquiry, H.R. Report 408, Pt. IV, 1922)



and upon the basis of this guess they risk their capital. Where a great many of these individuals who are interested in buying and selling and in anticipating the changes in the price level are gathered together, there comes gradually to be the institution that we know as the organized market. The individuals who buy and sell find it convenient to form some kind of organization and often, even, to locate their activities in some specific place or even to erect an expensive building for the purpose.

The important function performed by the middleman is the coördinating function which we have referred to above and, it must be said, it is difficult to see how a system of private business without any centralized control of the movement of goods from one institution of industry to another, and finally from the producer to the consumer, could be maintained without these specialists in coördination who buy in cheap markets and sell in dear ones. For buying in a cheap market obviously means buying where goods are not greatly wanted and selling in a dear market just as obviously means selling them where they are more wanted. In reality, therefore, what the middleman does is to initiate the impulse for the movement of goods from places where there are too many of them to places where there are not enough of them.

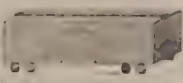

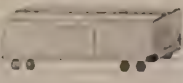

There is, of course, a fundamental difficulty with this theory, and that is that middlemen often find that they can make greater profits by withholding from the market, or, where it is highly organized, by "rigging" it for their own purposes. And this is a curious reversal of the normal function which theoretically they are supposed to perform, for, instead of facilitating the flow of goods from one place to another, they thus obstruct it. Also, it must be said, on occasion the middlemen, instead of linking the producer and the consumer by the most efficient bonds possible, find it profitable to themselves to obscure the real facts concerning the other to each of the fundamental parties to market transactions, that is to say, the producers and consumers for whom they act as agents.

These difficulties with the middleman-marketing system have brought about a general tendency upon the part of both great consumers and great producers to attempt to eliminate middlemen and to reabsorb their functions into the structure of large unified businesses or ones in which the relationships are maintained by

contracts which extend over large areas of space and long reaches of time. The modern large-scale retailers, for instance, such as the department stores, the mail-order houses, and the chain grocery stores, find themselves reaching back toward the manufacturer to

## A CHARACTERISTIC OF THE PRODUCE TRADE

### SMALL-UNIT, WIDE-VARIETY BUYING

	A Wholesaler Receives a Car of 320 Crates of Lettuce
	A Jobber ordinarily Buys 20 Crates or $\frac{1}{16}$ of a Car.
	Most Retailers Purchase One Box or $\frac{1}{320}$ of a Car.
	Mrs. Consumer Buys One Head or $\frac{1}{7680}$ of a Car.

Everybody Wants a Little of Everything and not Much of Anything.

The function of the middleman in the local situation. (Courtesy N. Y. Port Authority)

insure the supplies of the commodities they purvey; and likewise the manufacturer finds himself reaching out toward the control of the retailing of the goods he manufactures. Both of them find this necessary because of the comparative failure of independent middlemen to perform their functions to the satisfaction of the

chief parties concerned. With profit in the forefront of their ambitions middlemen often sacrifice the social service they ought to perform. And this is too costly.

### 3. *Other Agencies That Assist in Coördination*

The middleman system is not the only mechanism in modern industrial society that assists in the processes of coördination. Great systems of transportation and commerce, such as railways, steamship lines, and airways, would have to be mentioned among these. They very definitely tend toward the linking together of business and business, firm and firm, and even region and region of the earth and so help to reduce the differences in time and space, and to make easier the functioning of the whole industrial world as one system. To a lesser degree telegraph, telephone, and wireless assist in this process.

Also, one would have to mention in this connection banks and other financial houses. For not only do bankers maintain relationships with many different firms, and so form a link between them, but also they perform the function of drawing businesses closer together and making communications easier through their financial mechanisms for the extension of credit and the issuance of money. Also they form a medium for the pooling of savings and for their allocation to the various business firms in need of capital. Especially is this true of the kind of financial houses that are known as investment houses, which make a business of underwriting issues of stocks or bonds<sup>1</sup> and disposing of them to various banks and individuals who have surpluses of funds to invest.

Trade associations, too, are a recent development that would have to be mentioned among the very definite coördinating forces of modern industry. For the trade association, though it is a recent growth, has made itself a very powerful factor in the linking of businesses within the field of a single industry. Its activities are as various as the law will permit and sometimes, it must be admitted, extend a good way beyond the spirit of the law. There are upwards of 1200 of these trade associations of various sizes in the United States alone, which make it a part of their function

<sup>1</sup> To underwrite means to guarantee the sale of a certain issue of "paper"—charging a certain percentage, of course, and usually a high one.

to frame rules of business conduct, to disseminate the basic facts of the operation of the industry to their members, to study cost and accounting methods, to study the problems of standardization that are so important to each industry, to maintain bureaus of industrial research, to advise their members concerning relationships with labor and concerning such other generally vexing problems as traffic and transportation, commercial arbitration, the speeding up of distribution, foreign trade, the maintenance of relations with the Government, and coöperative advertising.<sup>1</sup> In all of these, it will be seen, the effort is to draw the businesses into closer and closer cohesion. Fundamentally the purpose is to act together in the various crises of industrial affairs. The general effect is, of course, to make the separately owned businesses of the industry act as if they were all members of a single firm.

There are, however, certain limitations to the effectiveness of the coördinating ability of all of these agencies. Neither the middlemen, the mechanisms of physical communication or of intelligence, the bankers, nor even the trade associations, yield sufficient unanimity of opinion and cohesion in action for the purposes of many modern industries. And the difficulties of securing an entirely efficient coördination under separate management have led in the direction of combination under a single ownership. This movement toward combination has been stimulated by the fact that, under modern conditions, savings are usually to be made by producing on a larger and larger scale because costs of production seem generally to be reduced per unit of product as the scale on which business is done grows larger. These two circumstances have brought about the present situation in industry in which many of the more stable industrial functions are carried on by fewer and fewer separate firms. The general tendency seems to be to unify into gigantic corporations, under a single management, the whole of separate industries.

This whole movement has been stimulated by the possibilities there are in the control of price, for if a business can not only secure the efficiencies that are to be had by large-scale production and by

<sup>1</sup> Cf. Franklin D. Jones, *Trade Association Activities and the Law* (McGraw-Hill, 1922). The status of trade associations has been made much clearer by a recent Supreme Court decision (1925) confirming the right of members to circulate price and other information among themselves.



unified management, but also control the supply of the product it produces so that it can control the price of the product as it wishes, it can enlarge thereby its already swollen surpluses.

The last half-century has witnessed the acceleration of these various impulses until the situation as we know it today has resulted. The course of the movement toward combination has not, by any means, always been smooth. Businesses seeking to ally themselves with each other met with the stubborn resistance of people who did not believe combination to be to the best interest of the nation as a whole. But the driving forces behind the movement for concentration were very great. Gradually they have overcome most of the obstacles that were at one time or another put in their way. Various different mechanisms were cleverly designed to comply with laws formed by people prejudiced in favor of competitive conditions and at the same time to embody the essential needs of industry for combination. Forms of organization called pools, others called holding companies, and yet others called trusts were devised. But one after another they were declared to be illegal by the United States Supreme Court as being "in restraint of trade," a phrase used in the famous Sherman Anti-Trust Act of 1890. We shall not go here into a discussion of the forms of these various mechanisms.<sup>1</sup> They have all taken on the generic name of "trust" which, although inaccurate, strictly referring to a temporary form of combination long ago declared illegal, has come to have so general a usage that usually when we speak of trusts we simply mean big business.

#### 4. *Problem of Allowing or Preventing Combination*

This whole movement toward combination has engendered years and years of discussion, legislation, and legal quarreling. It was purely economic in its intent and in the fundamental drives behind it, but unfortunately, it had to take place in a world whose economic beliefs were based upon nineteenth century dogmas of *laissez-faire*, the main tenets of which were that competition is the life of trade, that it protects consumer and producer alike, and that any interference with it is prejudicial to the interests of every member of the community. It follows,

<sup>1</sup> A sufficient discussion of them is to be found in Eliot Jones, *The Trust Problem in the United States* (Macmillan, 1921).

of course, from this premise that any tendency toward monopoly is an unwarranted interference with the liberties of individuals and tends toward the establishment of privileges for some to the detriment of the many.

No one was more convinced of this than the statesmen of the late nineteenth century and the early twentieth century, who were less familiar with economic facts than they were with the economic doctrines of half a century previous. The facts they observed in the business world unfortunately tended to bear out their prejudice in favor of competition and against combination, for everywhere they saw that when businesses combined the new firms' strength was used to subdue what remained of the competitors in the most ruthless fashion; and the abuses of unfair competition became almost as notorious as the dangers to consumers themselves from the prices established by the monopoly. The result was a long period of what has been called "trust-busting," the main legislative landmarks of which have been, (1) the Sherman Anti-Trust Act, (2) the Clayton Act, and (3) the Federal Trade Commission Act.<sup>1</sup> We shall not here discuss in detail the legislative attempts to block the combination movement in industry and to restore competition to its former pervasiveness, though the histories of these activities are in themselves extremely interesting.<sup>2</sup> We must be content with saying that the movement toward combination persisted and embodied itself in one form after another until every form had been vetoed by legislation or judicial decision and the only recourse was found to be a gigantic unified corporation which cannot be said to be a conspiracy in restraint of trade because a firm cannot conspire with itself and against itself so that where these great business combinations have finally formed themselves into one super-trust they cannot be touched by any effective legal measures.

However, it must be admitted that although various forms of business organization, such as the pool and the holding company have been time and time again found to be illegal by the Supreme Court, they still persist in many instances, though they might be

<sup>1</sup> Cf. Franklin D. Jones, *Trade Association Activities and the Law* (McGraw-Hill, 1922), Appendices A, B, and E, for the texts of the Sherman Anti-Trust Act, the Clayton Act, and the Federal Trade Commission Act.

<sup>2</sup> Here again, the student is referred, for more extended study, to *The Trust Problem in the United States*, by Eliot Jones.

dissolved if actions should happen to be brought against them. It has been found, in most industries, that the trade association is a very effective adjunct to the great corporation. Most stable industries are of too huge size for a corporation to be formed which includes the whole of the industry's activities within itself, and so it usually is found, in such industries, that the largest of the units control only from fifty to seventy per cent, perhaps, of the total amount of business done in the industry.

Whole industrial plants of very large size may grow up as closely allied to one organized industry as to another; and the question as to which shall take them over is often a very nice one, not to be settled offhand. Many such questions as this complicate the combination movement and make its analysis difficult.

Sometimes there are recognized two great forms of combination in business, the vertical and the horizontal "trusts," the horizontal

Automobiles	Automobiles	Automobiles	Automobiles
-------------	-------------	-------------	-------------

The upper chart illustrates the so-called "horizontal" form of organization. In this type a large corporation, such as the General Motors Corporation, controls a number of companies making a similar product. The lower chart, illustrates the "vertical" form of organization. In this type a large corporation such as the Ford Motor Company, carries on most of the essential subsidiary industries. (Adapted from an article in *Industrial Management*, May, 1924)

Automobiles					
Miscellaneous	Axles	Radiators	Body Plant		
Steel Plants			Glass Plant	Wood Working Plants	
Blast Furnaces			Saw Mills Etc.		
Iron Ore	Coal		Coke		Forests

trust being one which controls all the firms which operate a certain level of the industry, such as the recent combination of many of the important baking concerns in the country or of many which fabricate a certain kind of steel, or, indeed, make any other product. In contrast to this, the vertical trust is one which extends its control to the subsidiary industries which contribute to the industry. Good il-

illustrations of this kind of trust are the Ford Motor Company in the United States or the Stinnes Konzern in Germany.<sup>1</sup> The latter operates 65 iron-ore mines, 26 coal mines, 26 blast furnaces, 24 rolling mills, 12 different kinds of steel plants, besides automobile plants, transportation companies—rail, river, and ocean—newspapers, electrical plants for the manufacturing of batteries for signaling, separating metals, purifying air, drying fish, manufacturing cables, building X-ray machines, manufacturing and equipping subway systems, and power plants. The method of operation of such a vertical trust is described by Mr. Dwight T. Farnum.<sup>2</sup>

According to Mr. Farnum there exists a great official directory which contains hundreds of pages covered with names of mines and factories, of their directors, and of their products. If any Stinnes factory needs a new dynamo or a supply of belting, for instance, the director turns to this directory and orders it from the nearest other Stinnes plant. If a large foreign order of steel rails is placed with the Stinnes Konzern, for instance, the iron will be extracted from St. Alpine-Montan mines in Austria. It will go to the blast furnaces of the Stinnes Dortmund plants in the Ruhr where Stinnes coal has been dug and coked in Stinnes ovens and the by-products have been dispatched to another Stinnes plant. On a Stinnes railroad the coke has been carried to the Dortmund blast furnaces, the waste gases of which are utilized in other Stinnes plants. The pig iron manufactured there is taken to Stinnes rolling mills and made into rails. A Stinnes barge then carries the rails down the Rhine to the Stinnes Commerce and Transport Company in Rotterdam from which a ship of the Hugo Stinnes Corporation of Hamburg carries the rails abroad.

The Stinnes director with a secret official directory in his hands, simply telephones his orders to another Stinnes firm and enters the debit in his books. His supplies are sent to him on a telephonic order. His goods are shipped to Rotterdam on a telephonic order and from the time the iron first leaves the mines until the rails are delivered abroad not a cent of money need pass between the con-

<sup>1</sup> The Siemens-Rhein-Elbe-Schuckery Union, to use its full and correct name. Recent press dispatches indicate the dissolution of this great industrial structure—seemingly for financial rather than technical reasons, however. When all evidence is in, the history of this concern will furnish an object lesson in industrial organization of great significance.

<sup>2</sup> In *Industrial Management* for May, 1924.



stituent parts of the Konzern. When the goods are paid for abroad, the Stinnes Commerce and Transport Company simply pays its bills to the plant, which in turn pays the mines, etc.

This is admittedly one of the most highly integrated industrial firms in the world but it illustrates a tendency which is not confined alone to the Stinnes Konzern, nor indeed to Germany. The same tendency if not the same actual situation exists in the United States, and all attempts to block this kind of development have failed because the efficiencies in coördination and the savings in production expense that are involved have made possible so great a cheapening of the product as to make a continuous pressure for combination on the part of those in charge of operations which simply will not be denied in the long run.

President Wilson's industrial philosophy which he called *The New Freedom* was an anachronistic last attempt to restore competition and to make life easy again for the small business man; but it was not embodied in any effective legislation, although the Clayton Act and the Trade Commission Act were last attempts to stem the tide of combination. *Laissez-faire* dies hard because, unfortunately, orthodox economic theories still recognize it and because statesmen are formal-minded and are inclined to lean more heavily on old economic principles than on new economic facts. Practically, though, the persecution of business on account of its legitimate bigness has been pretty much given up because of a growing sense among people everywhere of the obvious necessities for bigness and of the general welfare that is involved.

As a matter of fact, one who should investigate the activities of the Department of Commerce under the direction of Secretary Hoover would be forced to the conclusion that the activities of that department, at least, are almost wholly opposed to the spirit, if not the letter, of the Anti-Trust Acts, for Secretary Hoover is interested in the extension of trade association activities and all that in general goes with the attempts of business to standardize itself and to bring order from the chaos of nineteenth century competition. In a sense we have a government that has no unanimity of opinion or action upon this problem of the direction of industrial energy into certain structural forms. But here again, the question seems to answer itself. For the combination movement goes on.<sup>1</sup>

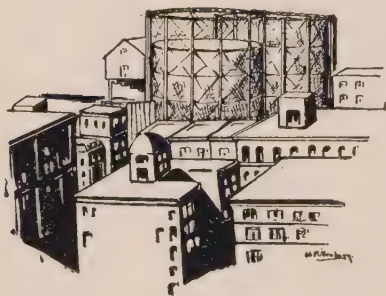
<sup>1</sup> The recent Supreme Court decision in the cement case makes it even clearer that the policy of suppression and the enforcing of competition belongs to the past.

### 5. *Government Regulation and Ownership*

The alternative of trying to break up combinations and to restore competition is not necessarily submission to the price-regulating force of monopoly, as many publicists assume. There is another alternative which is, of course, to recognize monopoly as inevitable and in the interest of general welfare, but as needing regulation to secure the benefits of its superior efficiencies for the public rather than for the individuals who are concerned in the ownership of the firms involved.

This regulation does not have to appeal to any new principles in law or in the relationship between government and business, for, as far back as we can go in the history of the relationships of the English government to business, from which of course we get our legal precedents, there have been controls of business in the interests of the consumers of its products. Common carriers, for instance, have always been controlled and likewise other businesses which, in the phrase of the Supreme Court of the United States are "affected with the public interest."

This control or regulation is accomplished under what are



"Gas tanks." The distribution of gas is a public utility business subject to public control. It is necessary to urban dwellers and its price is likely to be unduly raised by monopolists. In such a case, American law recognizes the paramount interest of the public.

known as the "police powers" of various states, which enable them to regulate business in any way they see fit in order to insure that the public welfare shall not be endangered by the activities of business. These police powers extend not only to control of business in the interest of health, but also to control in the interest of the pocketbooks of consumers. So that when it can be shown that a business has been so monopolized as to threaten to maintain so dangerously high

a price that many people may be forced to forgo the use of a good or a service which is essential to their health or welfare, the state legislatures may step in and say that the price shall not be such as to cause this injury.

There are many instances of this kind of regulation, most prominent among which are the regulation of railway rates,<sup>1</sup> the rates of municipal railway corporations, of gas, telephone, and electric light companies, and their like, which are usually called public utilities. But there is no reason in law or fact why the same regulations should not be extended to other businesses which threaten the same injuries to the consumers of goods and services.<sup>2</sup>

The proponents of the system of regulation offer it as an alternative to the breaking up of modern large-scale businesses. They feel that regulation offers many favorable possibilities that the older system of "trust busting" did not. It is positive instead of negative, they say; and recognizes the inevitable economic developments which bring about large-scale business, at the same time attempting to secure them for the interest of the general welfare. It takes the place of the old-fashioned "free competition" which was supposed to protect the consumer and producer alike. It has, admittedly, its administrative difficulties, but these, its advocates say, are far less than the importance of the savings that are to be made by its operation.

In any case, what one can say about the whole matter is that apparently the combination movement in business has such powerful economic impulses behind it that it has come to stay and that it would seem to be a rather foolish public policy to go on with attempts to smash business because it is big, instead of trying to take advantage of its bigness for the general welfare. Outlawing big business has merely succeeded in losing its benefits to the general public. Perhaps recognition of it may secure to them some of these lost benefits.

#### 6. *Money, Shifting Levels of Price, and Their Stabilization*

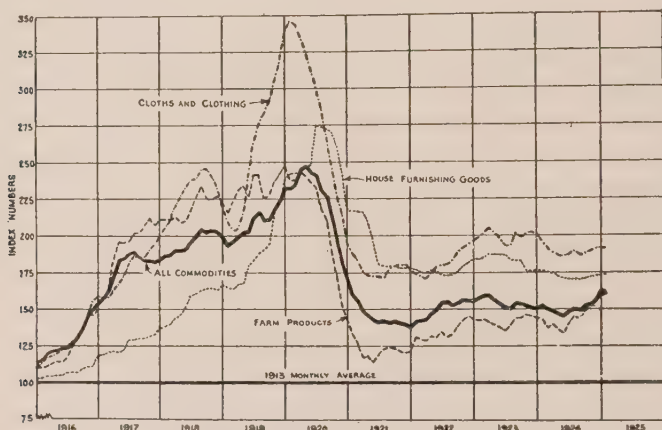
The common denominator into which all goods are translated for the purpose of attaining fluidity of income and for expressing in a common language the exchange value of goods, we call "money." Our standard of money is the dollar; the English standard is the pound; the French standard is the franc—and

<sup>1</sup> By the Federal Government, under the interstate commerce clause of the constitution.

<sup>2</sup> Cf. for a more extended discussion, R. G. Tugwell, *The Economic Basis of Public Interest*, 1922.

so on. There are, however, more than one kind of dollars and it may be well to look at them for a moment, for the purpose of understanding their relationship to productive activities.<sup>1</sup>

In a price system such as ours, everything is produced to sell at so many dollars or fractions thereof. And this is just as true of services—labor and management—as it is of material goods. If enough dollars are not forthcoming, when the productive process is completed, to meet all the costs that were incurred and to



This chart shows how, though there are minor differences in price movements for various commodities, the shifting of the dollar carries them up and down in great sweeping movements that affect all prices. This tendency of price levels to shift as the value of the dollars shifts is one of the principal elements of uncertainty in economic life. (From *Survey of Current Business*, Apr., 1925).

yield some profit, the business or the individual is in a bad way. One of the important forces that help to fix prices is just this knowledge and foresight on the part of producers. A business will not permanently sell its goods below cost—indeed it will become bankrupt if it does. And a worker will not sell his services for less than the cost of maintaining a certain standard of living. Both of them—the business and the worker—may be forced to do so; but not permanently and not without a severe struggle. The situations are not exactly analogous because sometimes a

<sup>1</sup>For a discussion of money see Foster and Catchings, *Money* (Houghton Mifflin, 1924).



worker will go on working at a price that definitely reduces his standard. But he will resist strenuously.

The point of this for our uses here is that this selling price is made in dollars; and our dollars, being constituted as they are, shift in value. That is to say that although they are nominally based on a fixed standard, they actually will buy more goods at one time than at another. And these goods are the standard of living which the worker is trying to protect and the materials which the business man is buying and selling. To both, therefore, it is a constant source of uncertainty that the dollar shrinks and expands in purchasing power. If it would always buy equivalent amounts of corn or flour or shoes or chairs or steel, every one would be able to look ahead with more confidence. As it is, when a business man contracts to sell or to buy goods three months or a year ahead for \$10,000, he has no way of knowing how much that \$10,000 will represent, by that time, in power to purchase other things. If he is operating on a basis of ten per cent profit and the dollar shrinks in purchasing power he may find his profit cut to five per cent or even entirely wiped out. Similarly a wage contract made in shifting dollars may mean a higher or lower standard to its recipients according to the appreciation or depreciation of the dollar.

This may seem a strange phenomenon at first. But it is directly consequent upon the fact that we have adopted gold as the standard for money and that the dollar has been made equal in value to 23.22 grains of it. Now gold, like other commodities, shifts in quantity produced and used, and so in value. But since the dollar is equal in value to so much of it by weight, every time the value of gold shifts, the value of the dollar shifts also.

But the whole matter is complicated also by our having supplemented gold with other media of exchange. We have paper money—notably Federal Reserve notes—and bank checks as well as subsidiary coins such as half-dollars and dimes. These are all so issued that they bear a fixed relationship to gold; so that, although we have many kinds of money other than gold, the yellow metal—23.22 grains of it—remains the basis of our currency, And price levels continue to shift up and down as gold fluctuates in purchasing power. How serious this is any one knows who has

observed the recent "rises in the cost of living" which, as we see, were nothing more or less than a fall in the purchasing power of the dollar. We can measure these rises or falls in the price level by averaging all prices for a certain period and calling this average 100, expressing then all deviations from that average over a subsequent period of time as percentages of it. These percentage measurements are sometimes called *index numbers*.

The main attack on the dollar as a valid medium of exchange, when it so obviously causes great uncertainty throughout society, and makes it almost impossible to plan exactly any distance ahead, has come from economists who want to substitute a "goods dollar" based on the index number of all commodities for the present dollar based on 23.22 grains of gold.<sup>1</sup> This dollar, they say, would, at least, not forever shift in its power to purchase other commodities and would therefore bring about a necessary stabilization of the general price level. This would obviate the social difficulties due to uncertainties of future contracts in dollars, they say, and go a long way toward bringing about the regularization of industry. It would even obviate the worst difficulties associated with the business cycle, which we shall presently discuss, because the main difficulty there is the fact that prices rise, and make it impossible for consumers to buy, or fall, and make it impossible for manufacturers to sell.

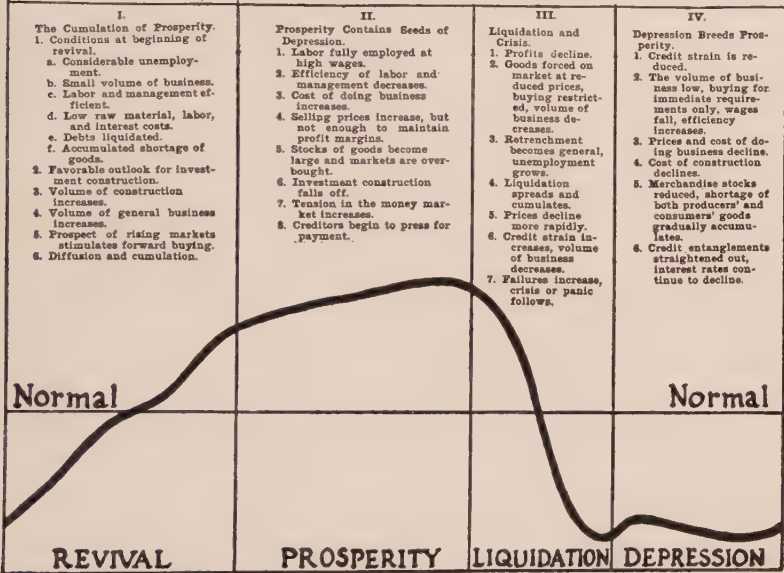
We think that no one can say whether such a plan for stabilization would operate successfully. The arguments for it seem to outweigh those against it; and on the whole, it seems to promise more than could possibly be lost by trying it. An industrial society such as ours is, in the grave difficulties of directing effort and eliminating waste which we face, ought to grasp at any promising scheme for melioration.

### 7. *The Business Cycle and Unemployment*

Closely allied to the problems we have been considering is another which has recently had much discussion—the "business cycle" and its subsidiary problem of unemployment. Perhaps the severest criticism of our whole system of socio-industrial planning lies in the facts that surround these phenomena. For by study of them we are driven to the conclusion that here is a picture of

<sup>1</sup> Cf. Irving Fisher, *Stabilizing the Dollar* (Macmillan, 1920).

human unintelligence and failure to master the conditions of existence at its very worst. When we discussed the contrasts involved in the ideals of making goods and of making money, we called attention to the anomaly of “progress” and “poverty” existing together. Here we see it again. For in the alternate periods of “prosperity” and “depression” we see each preparing the changes that create the other and we see nothing done to



An imaginary picture of the business cycle. (Printed by permission of Mr. Malcolm C. Rorty)

mitigate the evil consequences of either the feverish straining of effort of the one or the utter stagnation of the other.

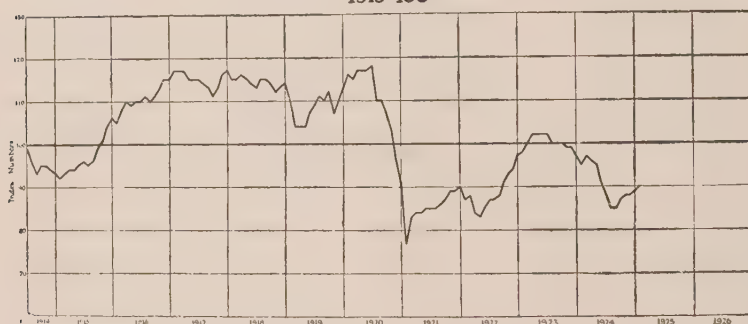
Depression, especially, has social consequences of the bitterest sort and the tragedy is intensified by the spectacle of workers in dire need of the very goods that ought to be made by the idle machinery of the silent factories. Something is evidently very wrong here. And evidently a remedy cannot be found by the technicians who operate industry. The trouble is with the larger phases of the general planning of activities—the coördination of businesses and of industries, not of individuals.

“Cycles” are so called to direct attention to their generally

rhythmic nature; for, though neither the time nor the extent of their swings have any exact correspondence with each other, the general picture is one of continuous movement, upward toward a peak of activity and downward toward a trough of stagnation. Between are all possible gradations; but there is never any extended period of stabilization when there exists so nice an adjustment that the needs of one business or one industry are precisely supplied by others; and when the product of each finds a ready disposal to other businesses or to final consumers.

What happens is that suddenly, following a period of intense

**Factory Employment**  
1913-100



The picture here is of the fluctuations of employment in the manufacturing industries, which are less subject than others to purely seasonal fluctuations, though there is usually some gain in spring and decline in fall. The great falls and recoveries are traceable to the recurrent periods of depression and prosperity that sweep over the whole industrial world. (From *Monthly Review of Labor Statistics*, U.S. Dept. of Labor)

activity, factories find their orders falling off, and merchants cannot sell their goods because consumers refuse to buy. This refusal is not voluntary because no limit to men's desires for goods has ever been found. It follows from an inability to buy so much of every good as would keep merchants active and factories running at prices that will cover all costs and enable every one to make profits. Naturally this refusal to buy is first felt in the non-necessity producing industries. These can be forgone most easily. But when automobile and piano factories close, for instance, a whole section of workers are thrown out of jobs. And since our society is so organized that income depends upon work,



their incomes are completely cut off. This reduces the demand for even necessities. Gradually all industries and all individuals are affected as the disturbance spreads. Matters eventually become so bad that millions are unemployed, many plants are either idle or are working only on part-time schedules, and the miseries of poverty creep upon the working population.<sup>1</sup>

Gradually, following this phase of the cycle, merchants dispose of the goods on their overladen shelves at the reduced prices which feature this depression. So merchants finally begin ordering again from manufacturers, the factories reopen and the upward movement begins that ultimately will end again in a crisis and a slump toward depression.

These movements in commercial and industrial life have been going on since history began, apparently; but their consequences have become more acute since the beginning of industrialism; indeed, the "business cycle" as a phenomenon of raggedly regular rhythmic movement is probably more properly to be ascribed to the age of the money economy alone. Certainly crises have come closer together in the industrial age as one of the accompanying phenomena of the acceleration in the tempo of all social changes, and have assumed that curious rhythmic aspect which gave rise to their description as "cycles."

For centuries men believed prosperity to be the "normal" state of business, a condition interrupted by periodic crises. In the broad sense of the word, including famine, pestilence, and other occasions of social distress, crises are as old as the human race. In a more restricted sense they still go far back. Such banks as there were in the seventeenth century—developing from the money-lending business of the goldsmiths—were seriously affected by the destruction of the British fleet at Chatham in 1667, and by the order of Charles II in 1672 which stopped payments from the British exchequer. In both these cases there was a "run" on the goldsmiths and a business situation that might accurately be termed a crisis. But cycles, as we understand

<sup>1</sup> No really extended discussion of the phenomena of the business cycle is attempted here. For such a discussion see W. C. Mitchell, *Business Cycles*, the standard work in this field, or, for a shorter treatment, the volume called *Business Cycles and Unemployment*, prepared by the National Bureau of Economic Research (McGraw-Hill, 1923). See also *The Economics of Business Cycles*, by A. B. Adams, for a concise treatment (McGraw-Hill, 1925).

them, did not appear until the end of the eighteenth century; that is, they did not appear until a large part of the population was engaged in making and spending money and had become dependent upon banks and financial institutions. Even after they appeared the cyclical nature of the phenomena was not appreciated and attempts were made for many years to explain the facts on an assumption of prosperity as "normal." The modern conception has been set forth perhaps most clearly by Professor Wesley C. Mitchell in the description, partly explanatory, which is summarized below.<sup>1</sup> Since the cycle is a cycle, it cannot be said, strictly speaking, to have a beginning. Professor Mitchell chooses to begin his analysis with the revival.

The revival inherits from the preceding depression a low level of prices, drastic reduction in costs of doing business, narrow margins of profit, liberal bank reserves, conservative policies in capitalizing business enterprises and granting credits, moderate stocks of goods, and cautious buying. The factors in the revival are three:

1. An expansion in the physical volume of trade. This may be slow or may be stimulated into sudden vigor by some propitious incident such as a profitable crop. Wherever it starts, the revival spreads into other fields so that the activity becomes general and cumulative.

2. The growth of business optimism resulting from the foregoing.

3. The cessation of the fall in prices and, later, a rise in prices. This rise is cumulative but it is not at all even. The wages of labor and overhead costs lag behind retail prices to such an extent that though raw materials and bank loans often rise faster than retail prices, many concerns reap large profits. These profits, of course, bring more optimism and further stimulate the expansion in the physical volume of trade.

But the process sketched above, while enhancing prosperity, also accumulates certain stresses which undermine the conditions upon which prosperity rests. These stresses are:

1. Gradual increase in the costs of doing business, including increases in the direct costs of wages and raw materials, the inefficiency of the raw labor that has to be brought in, and the inefficiency of management.

2. Accumulating tension of the investment and money markets.

<sup>1</sup> From his *Business Cycles* (University of California Press, 1913).

This situation is unfavorable to the continuance of prosperity because:

a. High interest rates reduce the prospective margins of profit.

b. It checks the expansion in the volume of trade from which prosperity is developed by checking the ventures projected.

The only method of offsetting "a" and "b" above is a continual process of boosting prices to cover them. It is obviously impossible to keep on raising prices indefinitely. Bank reserves could not stand the repeated calls for credit; certain prices are stereotyped by law, public commissions, long-term contracts, or custom. To the extent that some concerns can keep on raising prices the difficulties of the others are further aggravated. The margin of profit becomes narrower.

The worst feature of the decline in profits, however, is not the impending loss of expected dividends; it is the creation of doubt concerning the stability of outstanding credits. Business credit is based primarily upon the capitalized value of present and prospective profits, and credits outstanding at the zenith of prosperity are adjusted to the great expectations that prevail when the volume of trade is enormous, prices are high, and business men optimistic. When profits begin to waver creditors fear lest the shrinkage in the market rating of business enterprises which owe them money will leave no adequate security for repayment. Hence they refuse renewals of old loans to enterprises which cannot stave off a decline in profits; and they press for the settlement of outstanding accounts.

This process of liquidation, once begun, continues rapidly because each concern is compelled to call on others to liquidate. The result may be a mild crisis or an absolute panic. Banks have the double strain of a demand for more loans and for a return of deposits. Too many refusals may precipitate a panic.

Following the crisis is a period of depression, the limit of which is, after a time, reached. Direct costs have been greatly reduced by wage cuts and the fall in the prices of raw materials and bank loans. Unemployment tends to restore labor's efficiency. Businesses are reorganized, bad debts written off, and depreciated properties written down. Buyers' strikes are called off, demand for goods ceases to contract and begins to expand. With this beginning of revival the cycle is complete.

Other explanations of the cycle may be grouped as follows:

A. Physical causes.

- I. Jevons. Sun spots.
- II. Moore. Eight-year periods in the conjunction of Venus produce similar cycles in mundane weather, crop-yields, and business.
- III. Huntington. Weather cycles affect health which in turn affects business.

B. Psychological causes.

- I. Pigou. "Optimistic error and pessimistic error, when discovered, give birth to one another in an endless chain."

C. Institutional causes.

I. Processes of business management.

1. Hardy. Uncertainty gives rise to alternate over and under production of goods.
2. Veblen. Discrepancy between prospective profits and current capitalization.

II. Processes of producing goods and of distributing and spending incomes.

1. Hastings, Foster, and others. Incomes disbursed by business enterprises are alternately less and more than the full value of goods produced for sale.
2. Socialists. Overproduction resulting from exploitation of workers who receive in wages less than they produce.

III. Processes of consuming, saving, and investing capital in new construction.

1. Hull. Relatively slight changes in the demand for consumers' goods and in costs of construction cause far more violent changes in the volume of construction work, which in turn react to heighten changes in demand for consumers' goods.
2. Hobson. Large incomes, which grow rapidly in prosperity, lead to over-saving and over-investment in new plants so that supply exceeds current demand.

IV. Processes of banking.

1. Hansen. Banks increase purchasing power of business men when prospects are favorable by lending

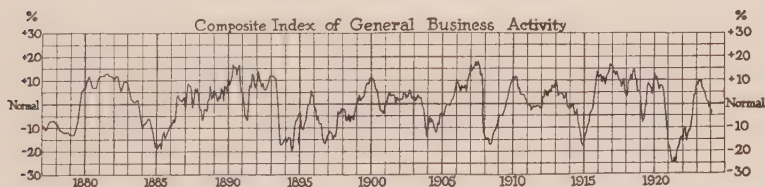


credit; later compelled to restrict advances. In following crisis and depression idle funds accumulate in banks and enable them to start new expansion.

2. Fisher. Discount rates lag behind when prices rise, giving borrowers increased profits and stimulating activity. Shortage of reserves forces a rapid advance of discount rates which pass prices. Crisis and depression are precipitated. Increasing reserves and dull business finally reduce discount rates faster than prices are falling and so prepare for a resumption of activity.

Although it may appear that the foregoing explanations of the cycle are mutually exclusive, actually this is not the case, for there is more or less truth in each of them. At present most students feel sure of only one thing: that no *single* factor adequately explains the cycle. And whatever may be the true explanation of the facts, the conception of the cycle is most valuable and useful. In using it we have first to measure it, a matter next to be considered.

Every one knows that pig-iron production, the prices of securities, cotton consumption, bank clearings, retail prices, and other



This chart is based on statistics compiled by the Statistical Division, American Telephone and Telegraph Company. (Used by permission)

similar phenomena vary from month to month or even from hour to hour. A record of these fluctuations over a period of time constitutes a statistical series. Any one of them, pig-iron production for example, not only shows conditions in one industry, it is also some indication of general business conditions; but by combining several such indices it is possible to secure an index that will reflect more accurately general conditions. One such composite index has been prepared by the American Telephone and Telegraph Company. The series included with their relative weights are:

	Per Cent
1. Outside clearings (adjusted for price changes)	25
2. Pig-iron production	20
3. Freight-car demand	15
4. Number of failures	10
5. Copper production	5
6. Cotton consumption	10
7. Bituminous coal production	5
8. Bradstreet's Index	10

The important suggestions for eliminating the cycle might be grouped as follows:

1. Changes in the banking system (largely accomplished by the Federal Reserve Act of 1913).

2. The utilization of Government and large industrial construction jobs as a balance wheel for industry, beginning them as other business falls off and stopping them during periods of great activity.

3. Stabilization of the dollar.

4. Dissemination of information concerning the cycle among business men, including the attempt to forecast business changes.

5. Closer coördination among various industrial units.

Some hope of the mitigation of the general bad consequences of the unemployment feature of the cycle is held out through schemes for insuring against its recurring periods. This is only to let the surpluses of prosperity meet the deficits of depression. At best such schemes, though important as makeshifts, are but makeshifts after all. And what is really needed is such a system of coördination of effort in the whole industrial world that these cyclical movements will be eliminated.

This would not eliminate all unemployment,<sup>1</sup> for much of it is due to social change—the shifting of demand from one good to another, for instance, or the invention of machines to perform activities performed before by human workers—and this form of unemployment can only be met by such social insurance as will force the costs of progress to be met out of its surpluses.<sup>2</sup> Another cause of unemployment is the seasonal nature of agriculture, canning, lumbering, building, and many other occupations. The

<sup>1</sup> For a discussion of unemployment, F. C. Mills, *Contemporary Theories of Unemployment* (Columbia University Press, 1922).

<sup>2</sup> For a discussion of this problem see H. R. Seager, *Social Insurance* (Macmillan, 1910).

difficulty here is one of forcing the industry to accept responsibility for the full-time support of the workers it requires only during short seasons, or such a coördination of needs that the seasons of work somehow dovetail and do not leave the individual periodically high and dry. Government employment agencies reached a high development during the war and mitigated considerably the severity of seasonal unemployment. They were promptly abandoned after the Armistice, however, when they were most needed, and have never been revived, though a number of states maintain such agencies within their own limited territories.

All the causes of unemployment referred to have, however, had to do with the larger social problem of lack of stability and direction in the industrial system of which they are symptomatic. Unemployment, after all, is a very secondary problem and is of consequence only (1) because it thwarts the desires of men to be active in industry and (2) because it cuts off their income. It may be that it is a mistake to make income dependent upon work. But if it is to be made so dependent, society ought to acknowledge its responsibility to provide the work. Failing that, the least that can in justice be done is to keep families, deprived of income through no fault of their own, from the worst consequences of poverty.

One reason, perhaps, why industrial owners and managers have not before now done more than they have toward the solution of the general problems of coördination and mutual group adjustment is that they have not had to. A plant shut down means to its owners loss of profits. To the workers it means loss of bread and butter. The loss of the workers is much the greater of the two. Forcing the industry to bear full-time wages as a first charge might result in stimulating a now hesitant movement toward really comprehensive industrial planning. And it cannot be said to involve more than simple justice to the workers involved.

### 8. *Industrial Democracy and Production*

We have already said that it seems probable we shall continue the movement already well begun toward the democratization of industry. This may happen through the enlarged ownership of corporate shares by the rank and file of workers or in some other more revolutionary fashion. But events seem to be forcing it.

It may be well, therefore, to raise the question of the probable effects of democratization upon productive efficiency and especially upon coördination.

One argument often used against workers' control is based upon probable lack of discipline when the pressures of fear now in use are removed. This extends to saying that not only will workers loaf in the factories but also they will indulge in inter-industrial disputes which will make coördination more difficult than it now is.

It seems clear, at least, that withholding of effort will be notably reduced by individual workers. For plant efficiency will depend upon the contribution to the finished product of each worker. And his fellows—rather than as now his employers—will discipline him for loafing. And they are in a better position to enforce it than the employer ever was. There may be some notable difficulties in the selection of executives, though trade-union experience would not seem to indicate it. But a more serious drawback may turn out to be the bargaining that will still go on among industries, each competing for a share in social income. No more than a suggestion of these future problems can be indicated here. But on the whole the future seems to hold even more than the past. It may well be that we shall have to sacrifice something of our industrial efficiency for the humanizing of the system. Certainly in a democratized industry problems will be solved more as our political problems have been solved and less in the autocratic way we have been accustomed to solve industrial ones. The prospect of a long period of chicanery and jobbery such as we have had in politics may not be pleasing but it seems to be indicated in a more democratic future. It too must be set down as one of the costs of progress.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Trace through the various steps and processes involved in the making and placing with the consumer of such a thing as a suit of clothes, a book, or a loaf of bread.
2. "With the growth of roundabout productive processes there has developed a more complex marketing system." Explain.
3. Is the middleman always socially desirable?
4. Name some of the agencies of coördination and explain their particular function in the business and industrial system.



5. What are the main factors accounting for the growth of business combinations? What forms have they taken? How do you account for these various forms?

6. What is the present attitude in this country toward business combination?

7. Does the workman's dollar always buy the same amount of goods? Defend your answer.

8. What relationship exists between the business cycle and unemployment?

## CHAPTER 17

### THE RELATION OF THE FINANCIAL ORGANIZATION TO INDUSTRY

#### 1. *The Place of the Financial Organization*

Economists sometimes speak of our economic life as being organized on a pecuniary basis and of our civilization as resting on a pecuniary economy. They mean by this that the relation of industry or the production of goods and services to prices or values, expressed in money, is continuous, and that the thinking of business executives has to be done largely in terms of money. What a thing will sell for, what will be the cost of making it, what the profits will be, all are expressed in money. And the effort to keep prices down or to raise them is a continual effort. There is a continuous preoccupation with pecuniary affairs in all industrial life.

It would be expected in such a system that there would be a series of institutions grouped about money and prices. And there is indeed a very complex financial organization in our society. It is arranged partly for the provision of money to carry on the transactions of business life, and has a very intimate relationship with the prices of things. But it also serves the purpose of collecting and distributing or allocating the funds that are available to the various businesses of the industrial world and for this reason too occupies a central place in the pecuniary system. A series of institutions that provide currency, that influence prices, that collect and allocate funds cannot be ignored even in the most elementary study of economic life. And programs for improvement cannot be formulated successfully without considering the influence of the financial organization.

#### 2. *Media of Exchange*

The various media of exchange provided for modern trading are supplied through the financial organization. Moneys are paid out over the counters of banks, and, though they are created or authorized by the government, almost invariably they reach

circulation in this way. There is another important medium of exchange besides money—bank checks and other negotiable instruments—which we shall presently discuss; but first we may enumerate and describe briefly the varieties of money.

There is gold. Gold is the basis of our money. Twenty-three and twenty-two hundredths grains of it constitute a dollar, the American dollar. And all our other moneys are expressed in terms of this weight of gold as a standard. But banks nowadays pay out very little gold coin. Most of what we use is paper money; but this too has many varieties. There are gold and silver certificates which are circulated in the place of gold and silver held in the Treasury vaults. Also, however, there are forms of paper money for which only a fractional reserve is kept in gold. These are largely, now, Federal Reserve notes, though there are remaining in circulation some older forms of paper money which, for simplicity's sake, we shall ignore.<sup>1</sup> Aside from these coins and notes, there are also the familiar coins of minor denomination which may be offered in payment of debt only within restricted amounts fixed by law.

The purpose that is served by all these is quite simple: they are for convenience in the exchanging of goods. They have relieved society of the necessity of bartering, of finding the exact equivalent in goods for what one has to buy or sell, which was one of the great drawbacks of primitive commerce. Now the values of all things are somehow transformed into prices expressed in money terms—gold dollars—so that one sells for dollars what he cares to and buys for dollars what he needs.

Bank checks and other negotiable instruments such as drafts and bills of exchange, are, in their wide modern use, the most



<sup>1</sup> For a full discussion the student is referred to H. G. Moulton, *The Financial Organization of Society* (The University of Chicago Press, 1921).

recent and by far the most important of all media. The check—expressed again in dollars—when given by one person to another in payment, means simply that the maker of the check transfers funds from the bank in which his funds are to the other party to the trade, who, very likely, deposits this check in his own bank. And so he may now pay his own obligations by similarly checking the transferred funds from his deposit account.

### 3. *Bank Credit*

This leads directly to the consideration of bank credit. For it is very often by the extension of credit that the original funds are created upon which checks are drawn. And here we come to another of the vital functions of financial institutions. Within limits, fixed by the requirements of legal reserves of gold, and by the judgment of their officers, banks may create purchasing power and confer it upon such individuals as may care to incur the obligation of its repayment. For this the bank charges an interest from which its profits are derived. Usually individuals who borrow are persons who are in money-making enterprises, who wish funds for carrying on their trades, and who expect such a surplus to eventuate that they can pay the interest demanded by the bank and still have a gain for themselves. This defines a part of the relationship that exists between the banks and the business community.

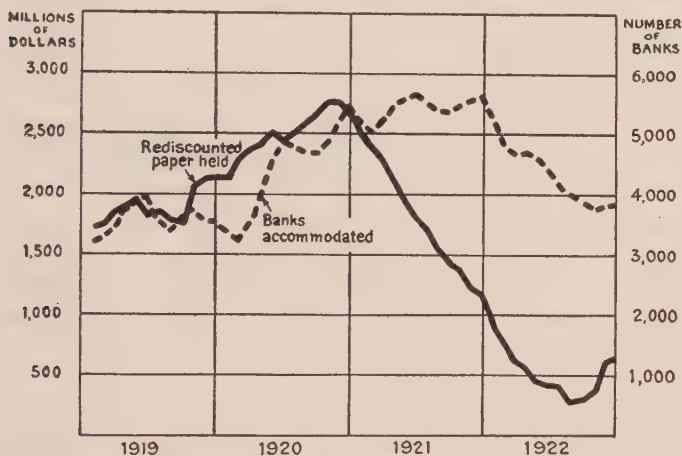
It will be seen that banks may discriminate among the businesses to which they lend and that, by doing so, they determine to a certain extent the direction which industrial activity will take. We shall refer to this function again a little later. For our purpose here it is desirable first to understand that when a borrower approaches his banker for credit, his banker demands from him a signed paper, called a note, which sets forth the terms of the obligation. Usually this note will be due in thirty, sixty, or ninety days, and must then be paid unless the borrower can renew the loan for a period. The banker may protect himself from loss by requiring the pledge of property equivalent at least to the amount of the note, which he may dispose of in the event of a failure to pay. This is called "collateral." The transaction is completed by an entry in the accounts of the bank which recognizes the borrower's right to



withdraw such sums as he may have arranged for. He can then write checks for the discharge of any debts he may incur in buying goods. But not quite to the full amount of the loan, for the bank will only have given him credit on its books for the *net* amount of the loan, which means that the interest for the full period will be deducted in advance. This is called "discounting."

#### 4. Money and Prices

But suppose that, instead of writing a check for the payment of his debt, the borrower from the bank wishes to pay his creditor



This chart shows the rediscounting of commercial notes by the Federal Reserve Bank from 1919 to 1922, together with the number of banks from which the paper came. It will be seen that the banks involved range from approximately 3000 to nearly 6000 and that the millions of dollars involved range between 300 and 3000. The immense service and influence of the System must be apparent. The chart is reproduced from the exhibit of the Federal Reserve System at the American Bankers Association meeting in 1923.

in cash; where does the currency come from? The answer to this is that the banker takes the note signed by the borrower to the Federal Reserve Bank in his district and has it "rediscounted," which means that he guarantees its payment at maturity and receives credit at the Reserve Bank for it, less the rate of interest then prevailing. This rate will be less than the rate he receives from borrowers, so that he profits by the margin. This transaction

gives him the right to withdraw from the Reserve Bank federal currency to the amount of his credit there. And it is this money that he pays out over his own counters as it is demanded.

From all this it will appear, perhaps, that money, in the widest sense of the term, including bank checks and negotiable paper instruments, is rather flexible in its quantity. This depends largely, it appears, upon the number of notes that are discounted by commercial banks. And this is exactly the result desired; because the amount of discounting (or borrowing) at banks is a fairly accurate measure of the amount of money needed to effect the buying and selling transactions of the community, borrowing being mostly for this purpose.

We are at once involved here in a consideration of the effect of the issuance of this money upon prices, to which we referred a little earlier. For it is well known that a change in the ratio of the amount of money to the amount of business transactions affects the level of prices. If money increases relatively, prices rise; if money decreases relatively, prices fall. This is because all the money in the community exchanges for all the goods. To illustrate this, at first, difficult point, suppose a pile of ten books and a pile, alongside, of ten dollars. Now suppose all the books to exchange for all the dollars. The price, obviously, of each book will be one dollar. Now suppose the pile of dollars to be halved. The price of each book will be fifty cents. Suppose *au contraire* that the pile of books is halved. The price of each will be two dollars.

This is a simplified illustration of a very complex process. But if the idea of the books is expanded to include all the goods we use and the idea of the dollars is expanded to include all our media of exchange a very fair idea of what may be called the quantity theory of money (meaning that the purchasing power of money is relative to the ratio existing between its quantity and the volume of transactions) will be formed. If, without a change in the other, there is a sudden change in either quantity of goods and services sold or the quantity of purchasing power in current use, the general level of prices will rise or fall as the case may be. And in a business system depending, as ours does, upon price relations, it is highly desirable to have as great a degree of stability as can be achieved. For this reason a flexible currency, increasing and diminishing as the volume of business transactions

increases or diminishes, is almost necessary. We have spoken before of proposals to obtain this result more efficiently, but we may here again refer to the great desirability of any force which tends toward stabilization. The so called Fisher plan, based upon an entirely different money system, using index numbers of goods transactions, rather than a fixed weight of gold as the standard of money has many prominent advocates and deserves more extended discussion and study than it can be given here.<sup>1</sup> What we



This chart shows the flexibility of Federal Reserve note circulation from 1919 to 1922. The dotted line shows the Harvard index of business activity. An ideal flexibility would have kept note circulation in exact correspondence with this line over the period. Instead of an exact correspondence there is a general one, note circulation coming to a peak late and deflation lagging behind business decline. However, the flexibility is greater than under the old system, when no relationship existed between the need for currency and the supply of it. Rediscounted notes are admittedly not a perfect index of business activity, but they are the best we have so far managed to use as a currency basis. (Chart from the F. R. Exhibit at the A.B.A. meeting of 1923).

need to see is that, under the present system, a certain desirable flexibility has been achieved by basing currency upon discounted commercial paper. Further than this we need to understand that the manner in which this discounting is carried on has implications of the most serious sort for the economic system. For it involves also the collection and allocation of capital funds.

<sup>1</sup> For further discussion see Irving Fisher, *Stabilizing the Dollar* (Macmillan, 1920).

### 5. *The Collection and Allocation of Capital*

Here we come to a consideration of another of the bank's relationships to the business community. Commercial bank deposits do not invariably arise by the extension of credit. Funds may be transferred from debtor to creditor and redeposited in another bank. Or currency may be deposited for safe-keeping. In these cases, the bank is performing the function of the collection of capital funds. But most of this function is perhaps performed by savings banks and investment houses. Savings banks collect small sums, usually, and limit the time within which their return may be demanded. They can therefore invest in less liquid and more profitable securities than can commercial banks, which have to pay depositors on demand. Investment banks receive no funds in this way. They simply handle securities—the bonds and stocks of business enterprises mostly—for firms needing additional capital, bringing them into touch with available capital sources, these sources being, of course, the investing public.

This is sometimes done on a pure agency basis, the bank acting for each of the principals, and sometimes on an "underwriting" basis, which means, simply, that the investment house guarantees the sale of the securities at a stipulated price. It is this function of collecting funds and placing them with investors that we have referred to as of such great significance in giving direction to industrial activity. For businesses do not ordinarily buy goods and pay wages and other costs with their own capital. They depend on getting it either from the sale of securities—stocks or bonds—or by borrowing from banks. For the building of plants and for the buying of equipment they usually depend upon the sale of securities, so that the placing function of the investment banker is crucial in determining the initial encouragement of the venture. Commercial banks, as a rule, furnish only operating capital on short-time notes. Necessarily this capital is used only for buying materials and paying expenses for which the returns are quick. The notes must be paid as soon as the product made has been sold. But even here a refusal of credit is extremely serious and must result in the contraction or cessation of producing operations. So that the commercial banker as well as the investment banker has something of a veto power over the forms of business activity.



It will be seen that it is of the highest importance that this encouraging and discouraging of business be carried on wisely, with a view to stimulating the production of much-wanted goods and to the restriction of the production of little-wanted goods. Our theory of control here is that much-wanted goods will be high in price and that less-wanted ones will be low in price. And so bankers are almost wholly guided in their allocation of capital funds by the prospects for the sale of the product to be made with the funds applied for by borrowers. If it seems likely that the business venture, after it has built its plant and installed its equipment, will be able to sell its goods at a price sufficiently high to pay expenses, including interest, the investment banker will be favorably disposed toward attempting to sell to the investing public the securities which will yield the funds for its beginning. And similarly, if the immediate market of a manufacturer seems favorable to his commercial banker, the funds for operation will be obtained without undue trouble.

There are two difficulties with this. First, well-paying ventures are not always socially desirable, and second, the anticipations of demand are often faulty. The first of these points needs no further discussion. Illustrations of socially undesirable ventures which have yielded high profits will occur to any reader. The second is almost equally obvious. It requires years sometimes to build and equip a plant. So that it is often impossible to say certainly whether at the end of such a long period, the public will show a sufficient avidity for the product to pay the necessary price. Even short forecasts of price movements are very uncertain, so that even commercial bankers, lending only for thirty or ninety days, often find conditions at the end of the period very different from their anticipations. The lessons here are that the criteria of price are, in their social aspects, often insufficient, as, indeed, our government recognized in war time when all large security flotations had to be authorized by the Capital Issues Committee. If for war purposes, it may be asked, why not for purposes of peace? The irregularity of price movements calls for all the machinery of stabilization we can devise.

## 6. *The Old Banking System and the New*

There are still these difficulties with the banking system. But

there were many more drawbacks to the old system that prevailed before the passage of the Federal Reserve Act in 1913. The new system makes currency more flexible, for one thing. Under the old system currency was based upon the national debt. Banks could secure paper currency only (with minor exceptions) by purchasing government bonds and depositing them with the government. This left the currency absolutely unresponsive to the fluctuations in the volume of the business transactions it had to effect. The new system, by basing currency on discounted commercial paper immensely improved this situation, though this admittedly does not achieve a perfect correlation between currency and the need for it. If it did there would, of course, be no minor fluctuations of the price level, only those due to shifts in the amount of gold in the country.

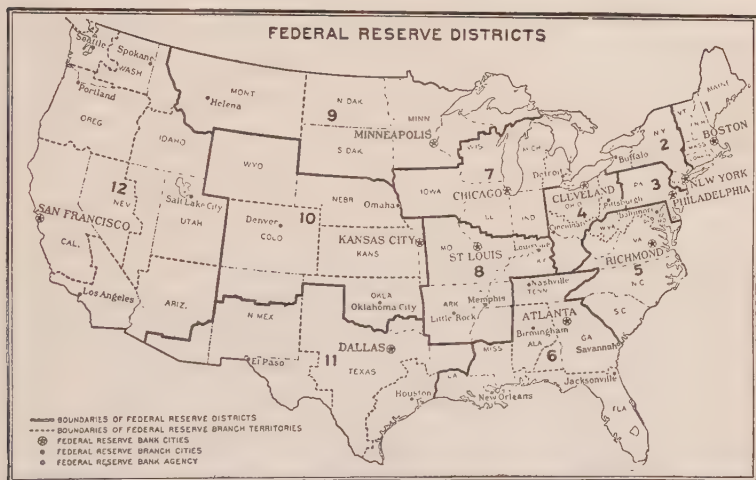
For another thing the new system by pooling bank reserves makes it unlikely that panics will occur, for with the reserves of all banks at the disposal of any one of them, such an immense reserve is readily available that no call for currency on a single bank or all the banks in a single locality could possibly exhaust it. Recurring panics were one of the worst features of the old system and their obviation is a great gain. But also the new system has made possible a use of the banking function for direction and control that is at least potentially superior to the uses of this function under the old system. In order to understand this it is necessary to describe shortly the organization of the new system.

The country was divided into twelve federal reserve districts and in each of them a federal reserve bank was set up to be purely a bankers' bank, to rediscount, to perform functions of exchanging credits among banks—this cancellation and the payment of debit balances only, is called "clearing"—to issue currency and in some measure to control broad financial policies. A map showing these districts discloses how well the country was divided. The governing idea of division was to have none so big that it could dominate the others, to "have regard to the convenience and the customary course of business" and yet to make each large enough to provide the minimum capital of \$4,000,000 required by the act.<sup>1</sup>

All national banks are required to join and state banks may

<sup>1</sup> For a further discussion see E. W. Kemmerer, *The ABC of the Federal Reserve Act* (Princeton University Press, 1918).

join if they wish. Member banks are required to subscribe to the capital stock of the reserve bank in their district to an amount equal to six per cent of the member banks' capital and surplus. The control of the federal reserve bank is by the principle of "one bank, one vote." Also all the banks in a district are grouped in three classes, large, small, and medium. Each of these groups elects two directors, one of whom is called a Class A director and the other of whom is called a Class B director. Each Class A



The map shows how the country has been divided into financial districts for purposes of the Federal Reserve System.

director must be a banker. Each Class B director must be elected from the non-banker community and usually he is a business man. To these six, three other directors are added by appointment of the Federal Reserve Board in Washington. And one of these latter is designated as Chairman of the board. In this way some representation of other than banking interests is secured.

The Federal Reserve Board at Washington consists of the Secretary of the Treasury and the Comptroller of the Currency, ex officio, and six other persons whom the President appoints to hold office for ten years. The board is also assisted by an "advisory council" of twelve members appointed by the boards of directors of the twelve federal reserve banks, which meets with the board at least four times a year.

Of this system as we have briefly described it Professor Kemmerer says: "The appointment by the Federal Reserve Board of three of the nine directors of each of the federal reserve banks and the appointment by each federal reserve bank of a member of the advisory council federate together the twelve banks under the reserve board and give a common knowledge and unity of purpose." <sup>1</sup>

We see then that, if it seemed to its directors desirable to control business, such a system could go very far. With its control over the general discount situation, and the position of moral leadership that its eminence gives, it could have considerable influence in encouraging or discouraging certain kinds of activity, and so in directing the course of industrial development.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What is meant by saying that the industrial system is a "pecuniary economy"?
2. Explain the relation of the financial mechanisms of society to the price level.
3. Enumerate the media of exchange we commonly use.
4. How is currency made flexible? Is it necessary that it be kept flexible? Why? Might the same result be obtained in some other way?
5. What is the quantity theory of money?
6. How does the banking system act as a guide to business activity? Does the new Federal Reserve System aid in this?
7. Outline the structure of the Federal Reserve System.
8. What faults appear to you to be important in the Federal Reserve System?

<sup>1</sup> *Ibid.*, p. 34.



*Section D: Making the Urban Life More Satisfying and Beneficial*

CHAPTER 18

REORGANIZING THE KINDS AND HOURS OF WORK

1. *Improvement in the Kinds of Work for Men*

In general what is needed to make work more satisfying for men in our present situation is to reduce both the amount of heavy, mucking work and of repetitive, monotonous work. These two kinds of labor are the bane of the modern working life. The kind of heavy work that is still done by men may be seen in such places as steel mills, cement factories, and even more typically in all the



Shaping fenders in a Ford factory. The press does not operate unless both buttons are pressed, thus obviating the danger of losing a finger. (Courtesy Ford Motor Co.)

extractive industries. The repetitive type of work may be seen in machine shops and factories wherever these exist.

The typical heavy work is lifting, pushing, hauling, walking. The first helps to the man who had to do this kind of work were the simple hand tools that were devised very early, such as the hammer, the ax, and the lever. There is still much work to be done by hand with shovels, sledges, wheelbarrows, in loading and unloading trucks and wagons, in moving materials and machines about and

in breaking up and remaking raw materials into the forms of commerce, but the tendency is unquestionably toward the elimination of this kind of work. The typical machines that have come in to take the place of man's effort here are to be seen throughout the industrial world. Such things as steam shovels, mechanical hammers, run by steam or compressed air, trucks handling loads from a few pounds to many tons, conveyors carrying things from one machine to another—all are familiar to the observer of industrial processes.

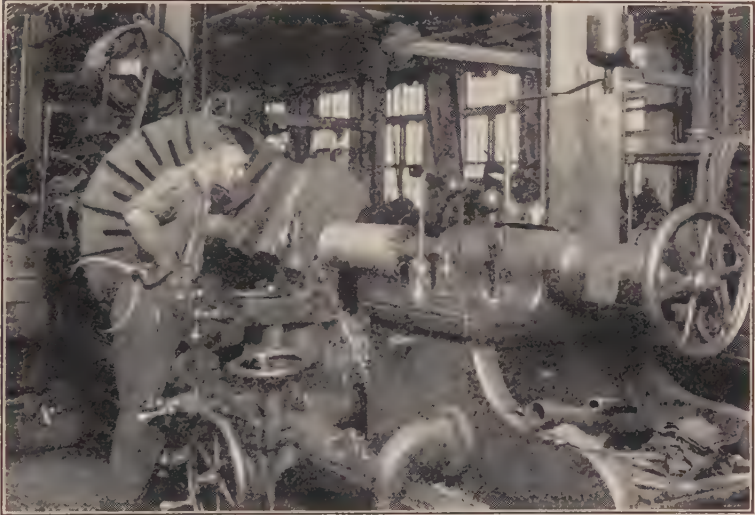
It was in the process of the elimination of this heavy hand labor, however, that the other bad feature of industrial work crept in. As the air hammers, mechanical shovels, the molds, lathes, presses, and polishers, the saws and planes came in there was developed a new type of industrial work—machine tending. This work involved, as is implied, very little actual expenditure of effort but much of what has often been very much worse—the terrible monotony of standing above or alongside a machine that repeats one operation again and again all day long, feeding it or removing materials from it. The worker at such a task must accommodate himself to the machine, becoming almost a part of it. Physical

motion for this machine tender has been reduced to a minimum. Mental effort has been practically eliminated. So that such a job calls for the use of only a very limited part of the highly developed faculties of the human mechanism. A single motion involving a few of the muscles of the arm may have to be repeated all day long. This leaves a residue of potential abilities that may cause the individual the utmost distress, for muscles and nerves are developed for use, and if



they are not used they either atrophy or form a fruitful cause of the development of psychoses which are disastrous in subtle and diverse ways to the individual involved.

Relief from the heavy, mucking work that was too great a strain upon the human mechanism is to be expected, then, from the development of machines such as the steam shovel and the mechanical hammer. Relief from the too repetitive jobs that have taken the place of the heavy ones, also may be expected, perhaps, by carrying the machine to its logical development. Monotonous work is an anomaly and must in time be eliminated. A job that asks very few motions or very simple effort from the human mech-



The modern lathe has made possible the speedy completion of operations which were formerly accomplished only by tedious hand processes. (Photo Hine)

anism is of the very sort that can be turned over in time to a machine. Machine tending is, much of it, unnecessary, and what may be expected to happen is the linking of machines in such efficient series that they automatically feed each other, so carrying out the coördinations of the total job without the intervention of man. Industrial engineers have a way of saying that "a repetitive job eliminates itself," and what they mean is, simply, that repetition is the essence of the working of machines and will sooner or later be taken over by them.

It is difficult to see anything but improvement in the situation from this expected change. In the first place, the machine does the

job more efficiently and doesn't feel the strain of unused capabilities, since it was designed for the purpose of carrying out a particular operation. Man, being trained for far different activities, finds his whole mental and physical mechanism outraged by the necessity of performing tasks which are unsuitable to him. In the second place, the individual involved will be greatly benefited by his having been removed from the responsibility of carrying on a task against which he is always in more or less conscious revolt, and which is far below his abilities. The manpower of industry may be expected to be freed by this process for the higher work of industrial life, for the planning and adjusting operations of industry. Machine work ought to be turned over to machines. Man ought to be reserved for man's work.

Special mention ought to be made in any discussion of the improvement of modern work, of the development of the routine and monotony of office work. There are, in the United States, numbers of persons involved in the paper work of industry which is carried on in offices, some of whom are attached to industrial plants, some of whom have to do with the various occupations



Even typing may become monotonous. (Courtesy N. Y. Edison Co.)

of marketing, and some of whom have to do with the recording and checking up of the general efforts of industry. It is unpleasant to be forced to bend for eight hours a day above a turning lathe, a polishing machine, or an air hammer; but it is scarcely less unpleasant to bend for an equal length of time above a ledger or a typewriter. The same kind of relief may be expected for this type of effort, however, that is to be expected in the other branches of industry. There has been, in the last few decades, a considerable development already of writing, reporting, and calculating machines and no one can say how far this will go; but it seems safe to assume that in so far as these tasks are repetitive and

monotonous, they will in time be performed by machines. There are already in existence many bookkeeping and calculating de-



vices that would have seemed inconceivable not many years ago, and it seems but a short probable development to the elimination of purely stenographic, calculating, and recording tasks.

So far as the immediate present is concerned there is a considerable need for relief in repetitive and monotonous tasks in factory and office which is being met by the modern development of various forms of recreation and amusement. Not all of these are taking the best possible direction, perhaps, but all of them represent attempts to escape from the pressures of industrial tasks that require at once too much and too little of men.

There is a surplus of energy that must find an outlet in some form and this accounts for the vast modern development of amusements and sports. The criticism that is to be made of the direction this movement has taken is that there is perhaps too little *actual* participation in modern forms of sport and amusement and too much stress upon *vicarious* participation. Perhaps the mental faculties of the individual who watches the sports spectacle in one of our modern stadiums, are exercised, but the physical effects cannot be said to be very salutary. What is needed, above all, for factory and office workers is to get out of doors and to exercise not only the mental machinery but the physical equipment as well. Modern sport offers all too little possibility of this for the ordinary individual.

For the business man there is the country club to which he habitually resorts and where he finds the healthful relief from office strain which ought to be available too for the persons in his organization who are perhaps less financially prosperous than himself. The development of city parks and adults' as well as children's playgrounds, the cheapening of motorcars, the development of recreational parks at mountain and seashore—all are movements in this direction and deserve the utmost encouragement.

A great deal, however, can be done and, indeed, is being done,



A public golf course. (Courtesy Playground and Recreation Association of America)

in the reorganization of the industrial plant itself. The really modern factory stands in vivid contrast to the factory of a generation ago in all the requirements of the human beings who make it their principal place of activity. In a well planned factory, thought has been given, not only to the efficiency with which materials flow from beginning to end of the factory processes and the coördination with which the assembly of the various elements of pro-



Types of women's work—ranging from the most unskilled to that requiring special preparation. (Photo Hine)

duction is carried out, but also to the human needs for light, for air, for cleanliness and general comfort, and indeed, for the very human need for a pride in the place of work. This whole tendency toward the physical betterment of the conditions surrounding modern work tends inevitably toward a closer approximation of liking for the job that must be done there. This in itself makes work not only a means but an end, which is, of course, what it ought to be. We shall have reiterated many times before the end of this book that there is a need not only for efficiency in production but also a conception of work as a part of life and a need for

making it more satisfying and beneficial.<sup>1</sup> It is not too much to say, possibly, that there is a likelihood of such a development within the next few decades. When work has been made as pleasant for all as it is now for some, and when the place where work must be done has been reorganized in all cases upon the plan of the better examples that are to be found at the present time, we shall have accomplished a regenerative task.

## 2. *Improvements in the Kinds of Work for Women*

The three chief kinds of work for women may be enumerated as, (1) housework, (2) factory work, (3) office work.

There are altogether in the United States some 8,500,000 or more women who are to be listed as gainfully employed. It is notable that this is nearly half a million more than were gainfully employed a decade ago (at the census of 1910). If, however, the increase of population is taken into consideration, the proportion of women gainfully occupied in the United States dropped from 23.4 per cent in 1910 to 21.1 per cent in 1920. On the face of these figures it would seem possible to say that employment for women is decreasing; but this is more apparent than real, for the number of women listed as working in the manufacturing and mechanical industries actually increased nearly 5 per cent between 1910 and 1920 and the number of women engaged in such clerical occupations as stenography and bookkeeping considerably more than doubled. The decrease in the gross number of women who work is due to the fact that all through this decade many women were dropping out of the employment listed as agricultural and nearly as many out of that listed as domestic service. This was perhaps to have been expected. The change in the home has decreased the amount of domestic service that is done. Women have found it too profitable to work in factories to care to go out into domestic service; and the change in the character of agricultural work has reduced the possibility of participation in it by women.

On the other hand, in eleven manufacturing industries as listed in the United States Census, including clothing, silk, knitting, lace, hand embroidery, candy, paper boxes, and paper bags, women actually predominated over men. The thirty occupational groups each employing 50,000 or more women are listed below.

<sup>1</sup> Cf. T. V. Smith, "Work as an Ethical Concept," *Journal of Philosophy*, xxi, 543-54 (Sept. 25, 1924).

This perhaps gives us some notion as to the numbers of women engaged in factory work and office work and reveals the fact that these occupations are expanding. It does not, however, show the numbers who are engaged in housework.

OCCUPATIONS EMPLOYING 50,000 OR MORE WOMEN<sup>1</sup>

	1910	1920
Farmers, general farms.....	257,703	247,253
Farm laborers, general farms.....	1,514,107	788,611
Dressmakers and seamstresses (not in factory) .....	447,760	235,519
Milliners and millinery dealers.....	122,447	69,598
Semi-skilled operatives:		
Cigar and tobacco factories.....	71,845	83,960
Clothing industries.....	237,270	265,643
Food industries.....	36,600	72,402
Iron and steel industries.....	23,557	57,819
Shoe factories.....	59,266	73,412
Cotton mills.....	140,666	149,185
Knitting mills.....	65,338	80,682
Silk mills.....	50,360	72,768
Woolen and worsted mills.....	52,056	61,715
Telephone operators.....	88,262	178,379
Clerks in stores.....	111,594	170,397
Retail dealers.....	67,103	78,980
Saleswomen (stores).....	250,487	356,321
Musicians and teachers of music.....	84,478	72,678
Teachers (school).....	476,864	635,207
Trained nurses.....	76,508	143,664
Boarding- and lodging-house keepers.....	142,400	114,740
Housekeepers and stewardesses.....	173,333	204,350
Laundresses (not in laundry).....	520,004	385,874
Laundry operatives.....	76,355	80,747
Nurses (not trained).....	110,912	132,658
Servants.....	1,309,549	1,012,133
Waitresses.....	85,798	116,921
Bookkeepers and cashiers.....	183,569	345,746
Clerks (except clerks in stores).....	122,665	472,163
Stenographers and typists.....	263,315	564,744

So far as women's work in offices and factories is concerned, it is as bad as men's. As a matter of fact, its most depressing qualities are the ones which have made it available to women and children.<sup>2</sup> It was not until machines took over a great part of the heavier

<sup>1</sup> *American Labor Year Book*, 1923-24, p. 35, also Women's Bureau, U. S. Department of Labor, 1922.

<sup>2</sup> It is significant, in this connection, that more than 2,000,000 *married* women are listed in the 1920 census as gainfully employed.



muscle-stretching jobs and substituted for them the lighter tasks of machine tending that women and children could find a place in factories. It is tragic that women should have escaped from the old-fashioned home, where their abilities were greatly needed and appreciated, into the kind of factories that were typical of the nineteenth century.

The same possibilities of relief that exist for men, however, exist also for women. Their jobs in industry are of the very types that machines can perform with the greatest efficiency and in many cases in industry at the present time, it is only a question with factory managers of the relative cheapness of woman or child labor and the installation and operation of machines. Very often it happens that some process for which a machine has already been invented and is now used in some places, will not be adopted by some other factories because women or children are available for the task at such cheap wages that it would not "pay" to make the expenditure necessary for the installation of machinery. In



The factory worker. (Photo Hine)

time, however, as human effort becomes more valuable and as the potentialities of women in industry become more apparent there will take place in all probability the same kind of substitution of machinery for human effort as is taking place in the case of men.

So far as housework is concerned, it can also be said that there has been generally a vast improvement. This is not to say, however, that there is not room for still more improvement. In the typical kinds of work such as cooking, cleaning, laundering, sewing, preserving, and the care and education of children, much has been done to make the effort of women more efficient, but it is undoubtedly true that more mechanical improvements have been made in the other departments of modern life than in the domestic

arrangements of the home. This is apparently because the work of the home is done on a small scale and was at first less adaptable to mechanization and because women have never received any training in the mechanical and planning arts which have had so rich a development in industry. It is a curious fact that most of the improvements in household engineering have taken place as a result of man's ingenuity rather than woman's and as a sort of



The electric washing machine is fast replacing the old washboard and tub—saving time and energy which can be directed toward higher human purposes. (Courtesy N. Y. Edison Co.)

by-product of industries which made and wanted to sell the improvements. It is in this way that improved stoves and cooking utensils have come in and the same observation would be equally true of implements for cleaning, laundering, preserving, and other household jobs.

The kinds of work that are done in the home, however, are very ancient crafts and develop readily into mechanical arts. Cooking, for instance, has long been recognized as essentially artistic in its nature and in a modern well planned kitchen with all of the world's food materials at command, the culinary artist can create as satisfactory a masterpiece as can be created by any other craftsman.

It would be more difficult to make out a similar case for other tasks of the household such as cleaning and laundering, and yet there have been vast improvements in these as well. Soap, for instance, as it is now made is a vast improvement over the soft soap that was made in the home fifty years ago. And there are a hundred improvements in the utensils that are used for cleaning and laundering which have tended to reduce the unpleasantness of this sort of work to a minimum. The most conspicuous of these are perhaps the suction cleaners which operate by electric motor, and the electric washers and ironers.

So far as preserving is concerned, there are many superior contrivances for pressure cooking and for the easy sealing of cans, as well as innumerable small but precious contrivances for the preparatory stages. It is,

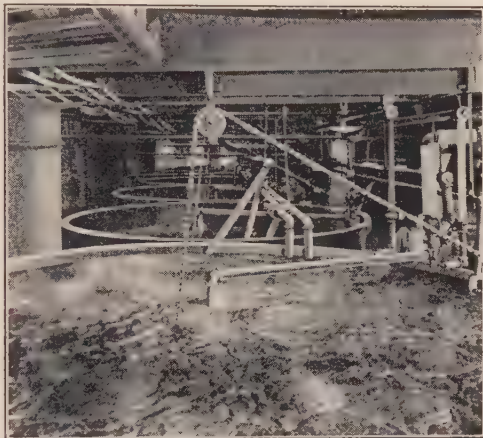
however, true in spite of these facts that very little preserving is now done in the home.

Most of it, like, indeed, the other traditional household tasks, has been taken over by the factories.

Sewing is another household art that has almost disappeared. Two generations ago practically

all the clothing of the family was made in the home, even though at

that time the cloth was perhaps not woven nor the wool carded and spun there as it had been a little earlier. Now, not only is the cloth made in factories but the clothing is cut and sewed there



Soap-making on a large scale. (Courtesy Swift & Co.)



An old-fashioned hand loom and a modern electric loom. (Photo Hine)

too, so that contemporary folk go to the stores to buy clothes as well as canned tomatoes or soap. Home sewing nowadays is confined to the more artistic touches and to altering and repairing.

Aside from these duties of the housewife, there is the still more

important one of the care and education of the children, which takes up so much of the time and effort of the housewife; but here too, there has been a great change. In the first place, families have been greatly reduced in size, so that there are fewer children to be raised and educated than in the families of our ancestors. Also, however, there has been a change from education in the home to education in formal places devoted to that purpose which we call schools.

In a rural civilization, such as America formerly was, it was enough if schooling taught boys and girls how to figure and read and trained an occasional boy for the tasks that must be performed by a pioneer lawyer, minister, or school teacher. The rest of the education of a child was got in the home or on the home farm. The girls were apprenticed to their mother. It was there that they learned to cook and sew and do all the various complicated tasks that were then involved in what was called housekeeping and the boys were likewise apprenticed to their fathers, who taught them the work of field and stable, the husbandry of grain and cattle, which was in all likelihood to be their future occupation. And this was considered to be an adequate training for that kind of life.

Obviously, however, life has become very different now and such apprenticeship training is no longer possible. We have in consequence developed a system of schools to take over this task that formerly was a part of the duties of father and mother, and have developed a special profession called school-teaching to perform this function.<sup>1</sup> In spite of this, however, a great deal of the responsibility for raising and educating children must remain upon the mother of the family. Although schooling occupies many hours of the day and devotes itself to the formal education of the child, it has not so far succeeded in taking the place of the intimate understanding which exists between parents and children, and which makes it so much more possible for fathers and mothers to inculcate the technique and morality of life to those who are coming after them.

The sole responsibility, however, is no longer the mother's. In this field, as in the others, the duties and responsibilities of women in the home have been vastly lightened, so much so, indeed, that many commentators are willing to say that the tasks of the modern

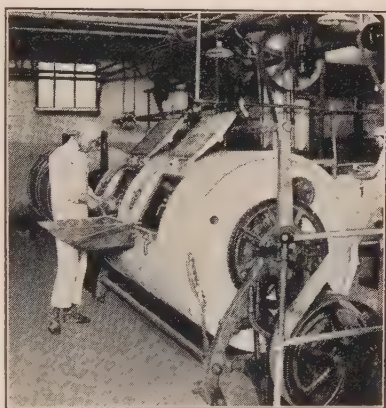
<sup>1</sup> Cf. also the discussion of education in the following chapter.



household are no longer adequate to the equipment and training which women are now prepared to bring to their life's work. And indeed there are two phenomena which seem to point to this as a fact—the modern movement of women into industrial tasks of various kinds, and the restlessness of women everywhere with the duties of housework.<sup>1</sup>

The general line of improvement then, so far as women's work is concerned, may take either one of two directions. (1) It may be that the kitchen will be reconstituted as the center of family life with all its activities made more enjoyable because they are more artistic and more efficient, or (2) home duties may be eliminated steadily in favor of commercial or coöperative schemes and so the home may be very nearly abolished. It must be confessed that the rapid growth of urban life and the tendency of that life so far as the home is concerned, seem to make the latter the more probable alternative. The city seems to be making the typical kitchen a kitchenette, where indeed it doesn't move cooking and eating into the restaurants, laundering into the steam laundry, preserving into the cannery, sewing into the factory, and the care of children into the school. For women who exist in this typical situation it is increasingly impossible to find a career in home-making, and they are forced to make a choice between a life that is essentially idle or trivial, and going out into the industrial world and finding whole- or part-time work in office, store, or factory.

The choice of the better women is quite obvious. They choose the occupation which challenges their powers, and this makes a problem which as yet we have hardly begun to analyze and to try



Modern butter-making—a decided contrast to the old-fashioned churn with dasher, known to rural folk of the past. Some of the old-fashioned ones still remain, of course. (Courtesy Swift & Co.)

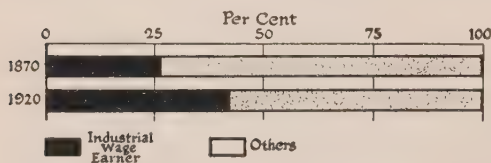
<sup>1</sup> Cf. Lorine Pruette, *Women and Leisure*, 1924.

to solve, the problem of at once utilizing women's energies in industry and making it possible for them to maintain the necessary relationships with the family that is dependent upon them. This is by no means an impossible task, however; it is simply one that requires more study and attention than hitherto have been given it.

### 3. *Hours of Work in City Trades*

We have already referred to the fact of the continued existence of such working conditions in city occupations as make necessary, because of the monotony or general unpleasantness of work, some limitation of the hours that are required. This is especially true in factories where there is noise, motion, and monotonous effort and is, of course, intensified where the occupation must be carried on in poorly lighted and ventilated working rooms. A scientist or professional man whose time is his own, as we say, may, without injury, work for very long hours; but the worker who has to repeat

his task every day, has to think in terms not of one stretch of work or of two, but of all the years ahead. His income and that of his family is dependent upon his continuous effort. He cannot



Industry employs an increasing number of the wage workers. (Based on statistics compiled by Alvin H. Hansen)

take a day or two off to recuperate whenever he feels like it. He is a part of a machine that moves relentlessly forward, and when the machine moves he is expected to be there to take his part.

It is this situation that we must think of when we are considering the problem of the reduction in the number of hours that are required of the usual worker. It was, of course, not many years ago that the prevailing hours per day in industry were twelve, but there seems to have arrived a time now when there is a general agreement that for the usual type of city-factory work the eight-hour day is about the maximum that can continuously be expected of human beings; and that in many cases the six- or seven-hour day would be far preferable from the point of view of human efficiency. The length of the working week has indeed decreased between eleven and twelve per cent as compared with its average

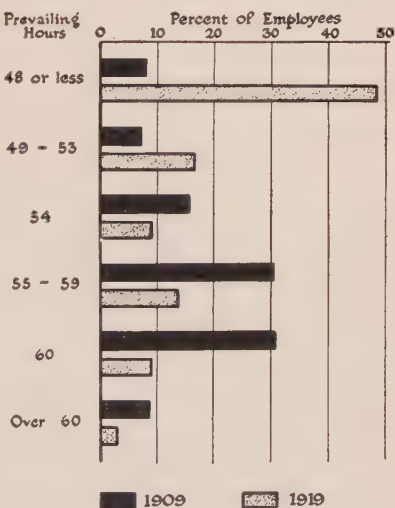
length for the ten years 1890-99.<sup>1</sup> Figures taken from the statistical abstract of the United States show that nearly half of the employees in manufacturing industries in 1920 worked in establishments which had adopted the forty-eight-hour week. The change in this respect can be seen by looking at the following table:<sup>2</sup>

PREVAILING HOURS PER WEEK	PERCENTAGE OF EMPLOYEES IN ESTABLISHMENTS WITH PREVAILING HOURS		
	1909	1914	1919
48 or less . . . . .	7.9	11.8	48.6*
49-53 . . . . .	7.3	13.4	16.4
54 . . . . .	15.4	25.8	9.1
55-59 . . . . .	30.2	21.9	13.7
60 . . . . .	30.5	21.2	9.1
Over 60 . . . . .	8.7	5.8	3.0

\* This includes 12.2 per cent who worked forty-four hours or less and 3.8 per cent who worked between forty-five and forty-seven hours a week inclusive.

The trend toward a shorter work day may also be realized by looking at the graphic representation on the following page of the percentage of employees who fell into different hour groups in 1909, 1914, and 1919:<sup>3</sup>

Perhaps even better information on hours of work is to be had from the investigation of the National Bureau of Economic Research.<sup>4</sup> This report makes some interesting observations: "Of all classes of employers reporting, those engaged in rendering domestic and personal service record the longest full-time hours for those working under their direction, the



This chart is a graphic presentation of the facts given in the above table.

<sup>1</sup> Douglas, Hitchcock, and Atkins, *The Worker in Modern Economic Society* (University of Chicago Press, 1923), p. 348. <sup>2</sup> *Ibid*, p. 349. <sup>3</sup> *Ibid*, p. 349.

<sup>4</sup> *Employment Hours and Earnings in Prosperity and Depression* (McGraw-Hill, 1923).

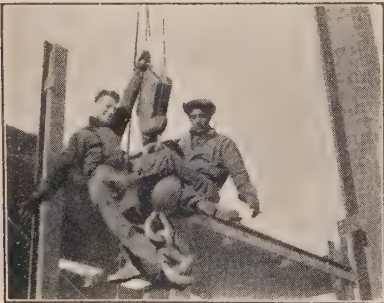
YEAR	LESS THAN 49 HOURS	LESS THAN 54 HOURS	LESS THAN 55 HOURS	LESS THAN 60 HOURS	LESS THAN 61 HOURS
1909.....	7.9	15.2	30.6	60.8	91.3
1914.....	11.8	25.2	51.1	73.0	94.2
1919.....	48.6	65.2	74.3	87.0	97.0

average being slightly more than eight hours daily for a seven-day week. Farmers and retail merchants each require over fifty-three hours of work per week. Employers in a considerable group of industries each call for less than forty-eight hours per week from their workers. This group includes building and construction, finance, public and professional service, paper and printing establishments, and factories making textiles, clothing and leather goods and other goods.”

This report of the National Bureau of Economic Research also discloses the fact that in general people who work for themselves work longer hours than those who work for some one else; also that the industries carrying the greatest number of workers require fewer hours per week than those who employ smaller numbers. Only in concerns employing more than one hundred men was the forty-eight-hour week general.

There are one or two problems which ought to be discussed in connection with the reduction in the hours of work, though we can

give them but very brief attention here. One of these has to do with continuous-process industries—steel-making, cement-making, and a number of others—which cannot shut down completely in any part of the twenty-four hours of the day. Here the problem of the reduction of hours is complicated by the need for introducing the shift system and by the fact



Steel workers. (Photo Hine)

that when there is a reduction it is a very important reduction and cannot be carried out gradually. When, for instance, hours in a steel industry were recently reduced for most workers from twelve to eight, there was a shift of four



hours per day per worker and the question naturally rose as to whether workers were to receive as much for an eight-hour day as for a twelve-hour day or whether they were to be paid at the same rate per hour as formerly. These problems have to be settled by a series of compromises, it seems. There is but one essential principle involved and that is that the industry to which a worker devotes his time and energies owes him an efficiency standard of living, whether he works eight hours or twelve hours. This responsibility of the industry cannot, in the long run, be evaded, so that usually industries which reduce their hours find themselves eventually compelled to pay as great a price for the service of labor for the shorter hours as they formerly had to pay for longer hours. This has been one element in causing the stubborn resistance of employers to the reduction in number of hours.

There is some evidence, however, that the reduction in the number of hours worked does not in many cases actually reduce the output of the industry but may, in fact, increase it. This is because of the increase in efficiency of workers during the time they are at work and the elimination of the two fatigue periods in the hour before noon and that before closing time at night when production was at its lowest rate and accidents were at their highest rate. Obviously, however, the hours of work cannot be indefinitely reduced without reducing output. It might be possible for a group of workers to turn out as much product in *eight* hours as were turned out formerly in ten, but it is scarcely likely that it would be found that they could turn out as much in *six* hours as they did formerly in ten. On the whole, it is probably unsafe to put the case for reduction in the hours of work upon the ground of the increase of output, because, in the first place, it will be found many times that output is not increased, and in the second place, because there are so many other good arguments for reduction.

One of the other problems that is often pointed out in this connection has to do with overhead costs, that is to say the charges that have to be met by a business whether its plants are in operation or not, such as the depreciation of machines, the payments it must make for rent, and for officers' salaries and the like. These obviously are quite as great when the plants and machines are

kept busy for six hours a day as they are when kept busy for the whole of the twenty-four hours. And with the modern tendency toward the progressive substitution of machine effort for human effort, there is an increasing pressure to keep the machines in operation the greatest possible number of hours; for even though the men who look after the machines get tired, the machines do not.



At work in a steel mill. The haziness in the picture is caused by the smoke these workers always breathe. Tuberculosis incidence is very high in such occupations. (Photo Hine)

A business executive feels himself, therefore, compelled to resist any movement which threatens to reduce the hours during which his plant and machines are kept in operation.

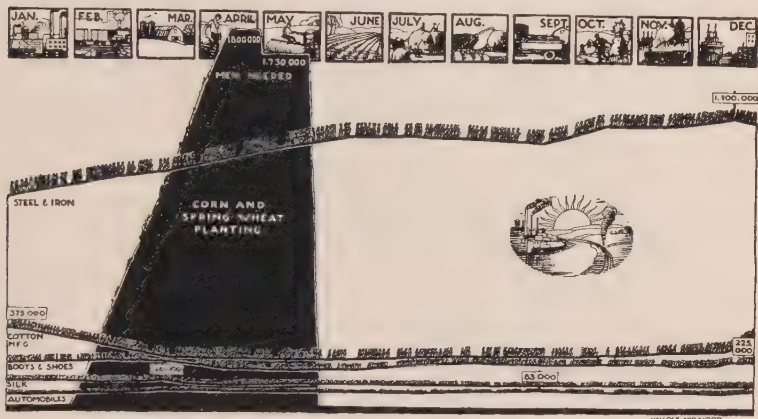
Still another problem is that of the seasonal trades, which are directly dependent upon ripening crops that cannot be efficiently stored, or are affected in a varying degree by the weather or the changing demands

of the seasons. The seasonal fluctuation of the activities of these industries has in many cases been greatly reduced and the problem of overwork and long hours therefore mitigated; but there are many industries still, like the canning industry, which find it very difficult to avoid periods of feverish activity in one season of the year and periods of almost complete stagnation during other seasons.

It is this phase of industry that has given rise to the considerable problem of casual labor, labor that wanders from job to job as work becomes available at different seasons. There are great numbers of these casually employed persons who drift from job to job in the spring, summer, and fall, and eke out a precarious existence in city lodging-houses during the winter months. The situation has been materially improved, of course, by the increase of mechanization in industry and by the specific planning of different

industries for the correlation of their necessary fluctuations so that the end of one employment may coincide with the beginning of another. In this connection, we may again mention the necessity for government labor exchanges as well as the need for the better coördination among private businesses. Problems like this become social problems as well as industrial ones.

Another way in which this seasonal production has been to a



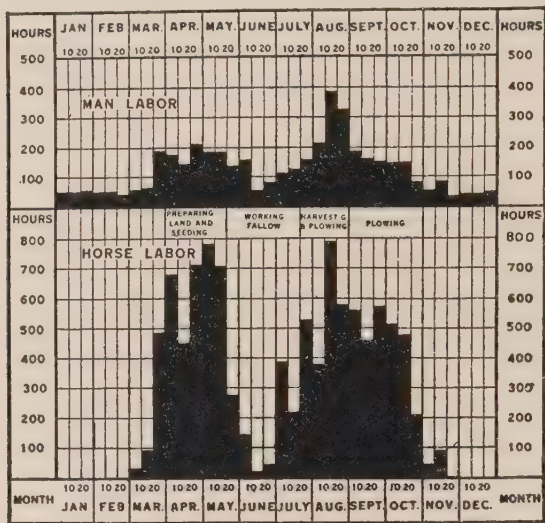
This chart shows the seasonal need of labor in different industries. Crop planting (the solid black) makes heavy demands on labor for a relatively short time. In comparison, the demands of other industries seem uniform; but this might not be the case if the conditions of the industries were carefully analyzed. (Courtesy *The Survey*)

certain extent mitigated has been by the superior methods of storage and utilization of ripening crops and by the distant anticipation of seasonal demands. We have learned by the use of refrigeration on a grand scale to store apples as well as wheat, and we have learned to anticipate throughout the year the fact that in June people will desire new straw hats and that in October they will desire new overcoats.

All of these various considerations would have to be admitted to the solution of the problem of hours of work. So long as we have an industrial system which operates in a pecuniary economy, business men will be forced to think first of ways in which they can cut their costs to the lowest and raise their selling prices to the highest, and we shall probably find them on the whole opposing reductions in the hours of work, even though, from the

social point of view, these may appear to be incontestably beneficial. Nor can we blame them. There must simply be a recognition that in some matters, at least, social considerations are more important than business ones and that where this is true business will have to give way before the demands of human welfare.

This is the background in which legislation for the regulation of hours of work is taking place. The proponents of regulation of the hours of work say that it is better to embody these regulations



Here we have a picture of the more or less regularly recurring seasonal demands for labor of men and horses in wheat farming. Planting and harvest require many times the men and horses used during the rest of the year. What to do with them the rest of the time is a problem. The industry accepts the responsibility for feeding and housing the horses all year round—whether there is work or not. But the men who work in the harvest have to shift for themselves in slack seasons. (Reprinted from U.S. Dept. of Agr. *Year Book*, 1917, Separate 758, "A Graphic Summary of Seasonal Work on Farm Crops," by O. E. Baker, C. F. Brooks, and R. G. Hainsworth)

in law so that all employers shall be treated alike and no one shall possess an advantage over any of his competitors because of his greater unscrupulousness concerning the welfare of his employees. Opponents of such legislation on the other hand, point, among other things, to the impossibility of making a flat standard, saying very truly that individuals differ in their abilities to resist fatigue



and in the enjoyment they get from their work. Also it is said that industries differ, and necessarily so, in their monotony and various other strains and therefore in the proper number of hours of operation.

Aside from the involved legal and constitutional questions concerning the regulation of hours of work, into which we shall not go here, we can say that there is something to be said both for and against legislative interference; but we should perhaps not find much disagreement in general opinion about the wisdom of setting up certain minimum standards to which industry should have to hold, or about the general principle that industry ought to require from the individuals employed in it only so much effort as they can spare from the other ordinary normal activities of life.

It may indeed be that the hours of work in some occupations may be lengthened instead of shortened. In time, when we come to a comparison between the desirability of the activities of work and of those of leisure, with industry reconstructed on the model of the best examples which can be seen now, it may very well be that men will prefer their work to any activity that might be called leisure. Such would be the ideal, of course, but it is perhaps not to be expected that this will happen in many cases or that it will happen even in those few cases soon.

#### 4. *Child Labor*

However we might disagree about the regulation of the hours of work for men in industry, or even for women, scarcely any one would argue that the unregulated labor of children is a good thing. There is at the present time a considerable movement toward its complete abolition. When we come to consider the fact that in the United States in 1920 more than a million children between ten and fifteen years of age were reported by the census enumerators as engaged in gainful occupations, we begin to see the necessity for some kind of legislative limitation. This number was approximately one-twelfth of the total number of children of that age in the entire country. It is to be remembered also that the census does not report the number of working children under ten years of age. It is known that such children are employed in large numbers, particularly in agriculture, in street trading, in domestic service, and in industrial home work.

The problem of child labor is greater for boys than for girls, as might perhaps be expected. There are indeed nearly twice as many boys employed as there are girls. The diagram on the following page shows the proportion of children engaged in each of the principal divisions of occupation in the country. It is perhaps notable that although by far the greater number who were listed as gainfully employed were employed in agriculture, there were still a significant number employed in factories, particularly in the

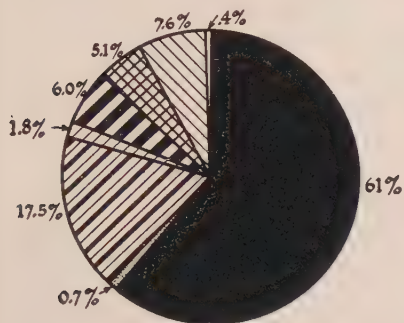










Types of rural and urban child labor. Topping beets (right) is heavy work and dangerous because of the liability of accident. Children become weary and the slip of a knife means a lost finger. Selling newspapers (left) very often necessitates night hours and places the child in an environment detrimental to health and morality. (Courtesy National Child Labor Committee)

textile industries. What work in the cotton mill does to the health and the future manhood or womanhood of boys or girls is too well known to need comment here. It not only interrupts their physical growth and in a very large percentage of instances causes the weaknesses that predispose them to many of the most fatal diseases of childhood, but it also interrupts their mental growth and the possibility of their becoming educated for any calling beyond that into which they have originally gone. It was this obvious consideration that led to the passage of a large number of state laws concerning child labor and ultimately to the passage of two congressional acts forbidding child labor in factories whose products were to enter into interstate commerce.

Most unfortunately, both of these acts of Congress were declared unconstitutional by the United States Supreme Court.

"Most unfortunately," because the standards of the states were so different and because the standards tended inevitably to be those of the most unscrupulous state. Obviously, employers operated their factories at less cost when they could employ children at their small pay to do the work that would otherwise have to be done by adults, and this gave them considerable advantage, perhaps, over employers in a



	Agriculture, forestry, and animal husbandry..	647,309
	Extraction of minerals.....	7,191
	Manufacturing and mechanical industries.....	185,337
	Transportation.....	18,912
	Trade.....	63,368
	Domestic and personal service.....	54,006
	Clerical occupations.....	80,140
	Other.....	4,595

Children in industry. (Based on statistics of the U.S. Children's Bureau)

similar industry in another state whose standards were higher. This led to a pressure upon the legislatures of the states with higher standards to reduce them to the level of the lowest. It was therefore thought desirable to make a standard to which all of them would have to conform. Since the declaration in 1922 of the unconstitutionality of the last federal child labor law of 1918 a number of resolutions have been introduced into Congress for the amendment of the constitution to permit Congress



Sweated home labor. (Courtesy *The Survey*)

to legislate in the matter of child labor, one of which has recently been submitted to the states for the approval of the necessary two-thirds majority of the legislatures. Enough have refused ratification to make its failure certain. And so the matter stands at present, with rules for the mitigation of child labor at the discretion of the state legislatures.

### 5. *Minimum Wage Legislation*

Legislation fixing a minimum below which wages may not be allowed to fall is another field of public regulation concerning which there has been a good deal of recent controversy. The right of the several states to enact such legislation seems to be settled now, however, by several Supreme Court decisions, so that the states are free to make whatever regulations they wish. It should be noted, however, as a limitation, that such laws as are now in effect apply only to females and male minors. No attempt is being made to establish minima for adult males, nor is the constitutional question involved settled. The accompanying map shows the progress of legislation.

The argument for such laws is well summarized in the re-



Minimum wage laws for women in the United States, 1924. Those states which are shaded have some form of minimum wage laws for women.

port of the director of the New York State investigation into the need for them:

"The results of the investigation have proved conclusively that half the workers in low-skilled lines do not receive sufficient wages to sustain themselves inde-

pendently nor to support their families properly. Although the earning capacity of most workers is relatively high, the large numbers of young women who live at home and the constant influx of immigrants with low standards of comfort depress the rates of wages. Moreover, irregular employment entails great loss



of earnings and promotion is generally slow and uncertain even for steady workers with years of experience.

"The rates fixed by many establishments are not based upon a consideration of the needs or efficiency of the workers, nor upon the capacity of the business to pay more, but upon the judgment of an individual manager and the custom in the trade.

"Because of their youth, their experience, and their timidity, most workers can not individually secure advancement; because of lack of organization they can not obtain trade agreements upon wages. Meanwhile this situation of a great multitude of underpaid working people has a direct bearing upon the growth of poverty, vice, and degeneracy throughout the community. If employer and employee will not unite to remedy conditions, the State must act in order to secure public welfare."

The results to be expected are summarized in the findings of an investigative commission in Massachusetts whose survey preceded the passage of the Massachusetts law in 1912:

"1. It would promote the general welfare of the State because it would tend to protect the women workers, and particularly the younger women workers, from the economic distress that leads to impaired health and inefficiency.

"2. It would bring employers to a realization of their public responsibilities, and would result in the best adjustment of the interests of the employment and of the women employees.

"3. It would furnish to the women employees a means of obtaining the best minimum wages that are consistent with the ongoing of the industry without recourse to strikes or industrial disturbances. It would be the best means of insuring industrial peace, so far as this class of employees is concerned.

"4. It would tend to prevent exploitation of helpless women, and, so far as they are concerned, to do away with sweating in our industries.

"5. It would diminish the parasitic character of some industries and lessen the burden now resting on other employments.

"6. It would enable the employers in any occupation to prevent the undercutting of wages by less humane and considerate competitors.

"7. It would stimulate employers to develop the capacity and

efficiency of the less competent workers in order that the wages might not be incommensurate with the services rendered.

"8. It would accordingly tend to induce employers to keep together their trained workers and to avoid, so far as possible, seasonal fluctuations.

"9. It would tend to heal the sense of grievance in employees, who would become in this manner better informed as to the exigencies of their trade, and it would enable them to interpret more intelligently the meaning of the pay roll.

"10. It would give the public assurance that these industrial abuses have an effective and available remedy."

Little needs to be added to this statement for our purposes here except to say that opposition to the passage of such legislation has gradually dwindled until, as "it is interesting to note, when the enactment for the District of Columbia was being considered by Congress in 1918, instead of opposing the law, the Merchants and Manufacturers Association of the District, took official action in favor of it."<sup>1</sup> In view of this it seems likely that considerable legislation of this sort may be expected in the near future.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What improvements have machines made in the work of man?
2. Suggest ways of further reducing the drudgery and monotony of certain operations.
3. Will making work more attractive and pleasant increase the productivity of workmen? Explain.
4. What part are women playing in the industrial life of the nation? How has women's work in the home changed in the last decade?
5. What reasons are advanced for the shorter work day, e. g., the eight-hour day? Does more hours' work per day necessarily mean greater output per day?
6. What special problems are introduced into the industrial mechanism by seasonal trades or industries? What methods for solving these problems have been suggested?
7. Suggest methods for reducing child labor in this country.
8. Is minimum wage legislation economically advisable? Defend your statements.

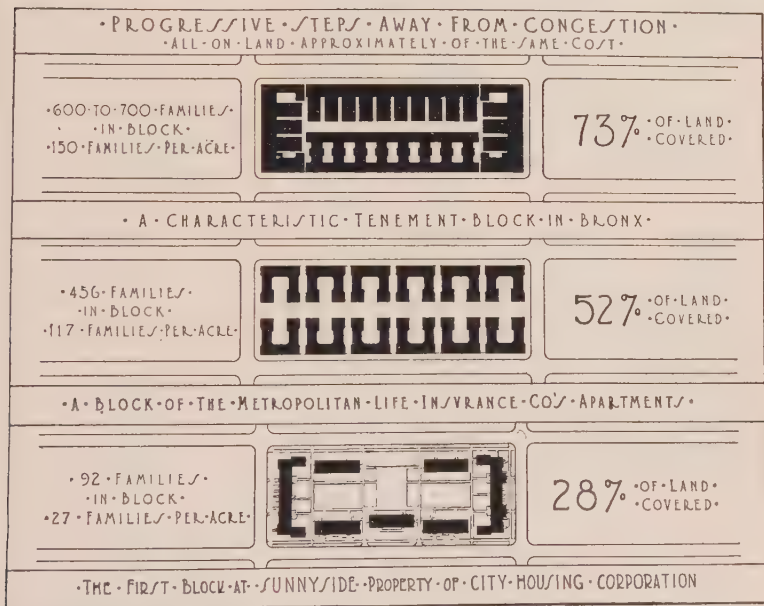
<sup>1</sup> *Minimum Wage Laws of the United States*, by Lindley D. Clark. Bulletin of the Bureau of Labor Statistics, U. S. Dept. of Labor, No. 285.

## CHAPTER 19

### IMPROVED STANDARDS OF HEALTH, EDUCATION AND RECREATION

#### 1. *Health*

In considering the possible ways in which the urban working life may be and is being improved, it is of first importance to consider the measures that are being taken (1) to guard the health of the community and (2) to develop its education and (3) its recreational

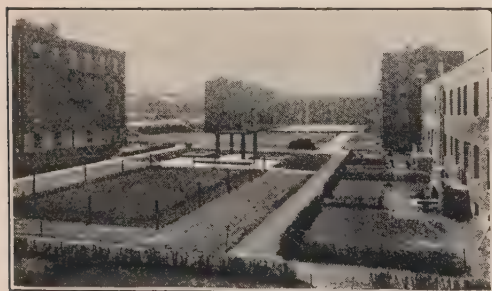
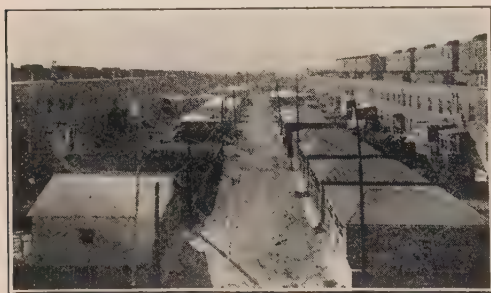


How a coöperative group propose to reduce urban congestion. This chart shows the relative areas of free space at Sunnyside, a block at the Metropolitan Life Insurance Company's apartments, and a typical block in the Bronx. (Courtesy City Housing Corp.)

possibilities; and we shall see that these considerations, if viewed widely enough, cover very nearly the whole requirements for community planning and improvement.

In considering what is necessary to be done in order to raise the

standards of health, for instance, we must first consider what are the enemies of the health of the community, and when we analyze the situation from this point of view it becomes apparent that such factors as the congestion of population that has followed from the growth of market centers and factory districts is quite as responsible for disease and misery as faults that can be attributed to individuals themselves. And any attempt to raise the standards of health would necessarily have to begin with the improved



Contrast between the use of open space in the interior of a block at Sunnyside (lower, and the arrangement in a typical speculative development near by (upper). (Courtesy City Housing Corp.)

planning of not only the houses in which people live but of whole neighborhoods, even possibly cities or towns. Socially minded persons have not been slow to sense this, and a great deal of attention has been given in recent years to the problem of town and neighborhood planning, even to the extent, in some cases, of starting all over anew and building whole cities where none existed before.

What is necessary to be done is really staggering when one considers from this angle the modern city that has grown up

haphazard at the junction point of several streams of commerce, with houses and factories, office buildings and warehouses all intermingled and the whole making an unplanned hodgepodge. In order to remake such a city—and this is a true description of most of our modern cities—it would indeed be necessary very nearly to destroy the whole structure and rebuild from the bottom up.



The fundamental problem that has faced town planners is implicit in the fact that towns and cities were founded and planned in an age which had no prevision of the developments which subsequently took place. New York City for instance is fundamentally wrongly designed with many narrow cross streets running across Manhattan and a few wide avenues running the length of the island. It was thought by designers that the rivers on either side would take care of up and down communications. The situation, of course, for modern requirements, ought to be exactly reversed. The present street congestion and housing difficulties follow directly from this unfortunately wrong basic plan. But other cities are scarcely better off. When we find whole blocks, for instance, as we do in all cities, filled with houses, and with no other area for recreation or garden space than is furnished by the street itself, the inference is easy that the situation came about through haphazard growth rather than any kind of planning. It must be admitted not only that this occurs in all American cities but that it is nearly all one can find in any city. However, if we look about for better examples, they are not difficult to find after all. And just as we should not expect the best and most modern type of factory to be the most prevalent type, so we do not expect the best type of community center to have spread everywhere in the few years since its conception.

The actual problem of housing, it will be seen, is quite a different one from that of city or town planning. The one has to do with the whole community; the other with the actual housing of the individual family group. More and more, good housing for the family depends upon good community planning, however, so that in the modern town or city the two come to be directly related. The actual provision of housing facilities becomes increasingly a matter of public interest. But as yet no American city has taken other than negative responsibilities in the matter. Usually cities define certain minimum standards which are intended to protect health, but stop there. Some cities abroad have gone further and, where housing facilities provided by private capital were inadequate, have started upon building programs of their own.

There has, however, in America, been a considerable movement toward what are called "company towns." These include some

of the best and some of the worst symptoms of our civilization. Some of them are of a type calculated to discourage all impulse toward home betterment, presenting, as they do, rough and drab exteriors, and interiors without the meanest contrivances for comfort. Some are so planned and constructed as to far surpass the ordinary arrangements for beauty and utility of the independent village or city. The great pervading difficulty with the older type of industrial town was the tendency toward monotony of design and the building of row upon row of houses of unrelieved sameness. That this feature is one easily escaped from is apparent, however, from the study of some successfully planned communities of this sort.<sup>1</sup>

There are subsidiary problems involved in the system of "company towns" such as the important one of the fuller control given



Bad conditions in company housing, too frequently found in mining and other communities. (Photo Hine)

the employer over his workers when they not only work in his factories but also live in his houses; but this does not change the fact that in the better type of company towns, the actual housing and the community facilities are both better physically provided for than is ever true in the haphazard towns and cities that are characteristic of our age.

That there is active thought and study being given to the problem, indicates that sooner or later a means will be found to reconstruct cities and towns after the model of the best examples we have at present. The fundamentals to be observed in any kind of town or city planning are the guarding of air, light and space. This may be accomplished, for instance, in an industrial center either by making the factory the center of a garden city of its own and developing there a company town, or in banishing the factories to a place reserved for them and keeping certain

<sup>1</sup> For a fuller discussion of this subject the student is referred to Leifer Magnusson, *Housing by Employers in the United States*, Bulletin of the Bureau of Labor Statistics, 263. A full bibliography will be found on p. 248ff. of that book.

sections of the city for purely residential purposes. Both of these plans have some adherents. Neither of them, of course, is exactly typical of the situation that is met with in most American cities, for most American cities are not only industrial centers but market centers where much trading is done and where there are many organized markets, and, consequently, many crowded office buildings huddled together in one section of the city.



An air picture of Washington showing the Capitol building as the hub of a great wheel, the spokes of which are the main avenues and streets. Washington is one of the few cities built on a definite plan. (Courtesy U.S. Army Air Service)

Assuming that it is necessary for this crowding to take place on account of the necessity for market functions to be carried on within a very circumscribed area, it is still possible to plan for and to create suburban residential sections with very cheap or even wholly free transportation from the center of the city to them. This latter plan is perhaps more common on the Continent of Europe than anywhere else and there has excellent results.

American cities cannot be said to have taken very seriously as

yet the responsibility for physical improvement which grows more and more pressing every year with the concentration of population and with the changes in industrial and automotive technique that make the old basic plans more and more antiquated for human purposes. Even the city of Washington, if we except the official sections of the city, displays many of the familiar attributes of other American cities, in spite of the fact that from its very beginning Washington has had one of the finest civic plans conceivable under the circumstances; and if this is true of Washington it is far more true of New York City, Chicago, Philadelphia, San Francisco, and the other great cities of the country. Certainly many of these cities, notably Chicago, have become somewhat self-conscious about the way in which their greatest avenues have been misused and have attempted to lay down certain minimum requirements which mercantile houses and office-building corporations must adhere to; and New York City has attempted to establish certain city zones in which buildings would have to conform to certain standards intended to protect the community; but all of these attempts have been so very partial that they barely touch the heart of the problem, which is, of course, the protection of the masses of the community against the consequences of overcrowding and badly planned facilities for modern life.

In this connection, it is perhaps well to mention the great effort that has been made by the Regional Plan of New York and Environs to survey the situation so far as New York City is concerned and to lay plans for its development for many decades ahead.<sup>1</sup> This survey is being carried out with the most meticulous care, and will, when it is finished, furnish the basis upon which the community can build up an ideal plan if it shall care to do so.

Greater progress has, however, been made in Chicago under what is called the Chicago Plan, than in any other American city. Great drives through and around the city, some with double levels, are in course of construction, and a comprehensive scheme for the grouping of public buildings and caring for public services is in process of completion. Other cities, however, Detroit, Los Angeles, and Philadelphia among them, are finding themselves forced to consider the means at least for the relief of congestion if not for beautification. None of the so-called "city plans"

<sup>1</sup> Cf. *Second Report of Progress*, 1924.



contemplate any relief for home-makers; only streets and public buildings.

So far as the actual housing of the community is concerned, there are two alternative possibilities. Either the community will be content to live in apartments or it will find it possible to keep to the older ideal of detached houses with some space around them. We can see both of these types of housing at the present time. The apartment-house idea has grown very rapidly, so rapidly in fact that the necessary corollary developments have been very nearly altogether forgotten. It is just as necessary to have light and a certain minimum number of cubic feet of air space per person in an apartment as it is in a house, and it is no less necessary to have provision for outdoor recreation and for space for children's playgrounds. All of the apartment-house areas in most of our large cities are still woefully deficient in these respects, though there is at the present time a considerable recognition of the need and an attempt to remedy the situation. It is made more difficult by the fact that here as elsewhere we failed to plan sufficiently ahead. And so when it comes to establishing playgrounds for children in our cities, we find all the available space already preëmpted.

In spite of these drawbacks, the apartment has certain obvious advantages that have enabled it to grow at the expense of the detached house. It is more possible to develop coöperative services for heating; for the provision of necessary household services, such as laundry and garbage removal, and it is possible to get a greater population into a given area. On the other hand, people cling to the older notion that *home* involves a *house*, and are rather stubborn in the intensity in which they hold to this idea. We find all of our great cities, for this reason, surrounded by immense areas of suburban homes which are built in the general fashion, though with far greater comforts and conveniences, of the farm home of



"Back-yard" scene in New York's tenement district. (Photo Hine)

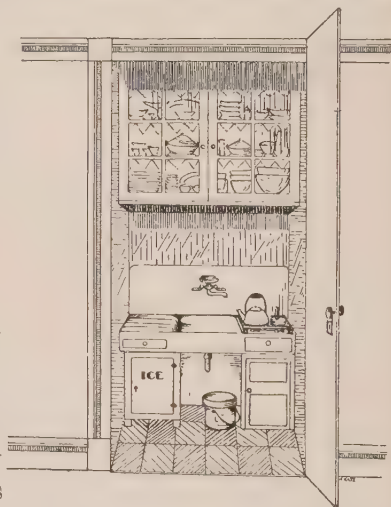
former generations. The trend of events, however, is against even the suburban house. John F. Harbison, architect, of the University of Pennsylvania School of Fine Arts, comments on this:

"Large rooms and detached houses cost money—more of course than before—because the workmen who build them are paid higher wages than formerly. They, too, are demanding their share of the luxuries and comforts, and therefore the money that makes these possible. As a people we are choosing the smaller rooms, expensive comforts. We are spending money on a number of things our grandfathers did not have: a bath to each bedroom—this is certainly the tendency; a heat of more than seventy degrees throughout the winter; running hot water, day or night, and in quantity; excitement at meals—music; and our pleasures have become expensive; theater tickets now costing what would have been within the memory of man a week's wages of a laborer. Even our attempts at physical well-being cost money, it being essential that we wear the proper sports attire, and this always of the latest model.

"The old-fashioned kitchen has already gone. The dining-room is going; when a cubic foot of home costs so much, we naturally begrudge spending our money for a room which is really used so very little. Bedrooms

will approach more and more the Pullman car compartment or the stateroom on a steamer, comfortable enough for the few hours we spend in them. There will

no longer be a spare room; guests will go to a near-by inn; and of course a storeroom is an anachronism in this day, when we insist upon everything that we use being new. With the automobile at the curb, the home needs to be less a place to live in because it is so easy to get away from. There is more temptation to be



The kitchenette—thousands of modern apartments have no more kitchen than is in sight here. What would your great-grandmother have said if she could have seen one?

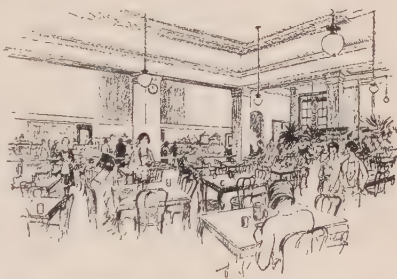
always on the go and home becomes merely an overnight parking-place for the few hours after we finish our evening's entertainment and before the working part of the family must report at its place of earning its daily bread." <sup>1</sup>

The housing situation in the whole country has been particularly backward for the past few years on account of the interruption of building during the years of the war and on account of the rapid growth in population, so that there has been more overcrowding than there would have been under more normal circumstances, but this only makes the problem a more acute one and makes it more necessary for us to face it and all of its complications.

One of the facts about housing that makes it seem particularly difficult is the declining proportion of families living in their own homes. This decline may be seen from the following figures for various census years of the percentage of tenants in the whole number: 1890—52%, 1900—55%, 1910—58%, 1920—60%. Just to point the contrast: tenantry in France is, on a comparable basis, 20%.

It will never be possible for us to have the kind of a life that can be justified by any rational standards until the whole matter of community planning is faced expertly and something more has been done to bring home and community life up to a reasonable standard.

These are not the only considerations, however, that must be thought of in any discussion of improvement in the standard of health of the country. The general diet of urban peoples deserves discussion also. In this, as in the matter of housing, we inherit certain traditions—if not, as in the other case, institutions—and



The cafeteria which the *New York Times* maintains for its employees—an opportunity for employees to select a nourishing diet at a low cost. Many employers are going in for this kind of supplement to their purely business activities. (Courtesy *N. Y. Times*)

<sup>1</sup> John F. Harbison, "The Automobile and the 'Home' of the Future," *Annals of the American Academy of Political and Social Science*, cxvi, 58-59 (November, 1924).

they are very nearly as hard to overcome, though a very rapid change is at present taking place. The old kind of diet for the typical American worker consisted of very heavy foods, largely meat and pastry. This diet was one which was calculated to sustain a man through the strenuous labor of a long farm day. It becomes a menace to the health of a city worker whose task is to bend above a machine or a desk rather than to handle a plow or a pitchfork. The number of calories needed by the average worker has been very nearly cut in two. The number of calories consumed has been nowhere near cut in two. But there has been a vast reduction in the consumption of meat and pastries in favor of a diet that is largely made up of cereals, vegetables, fruits, and sugar.

This improved diet cannot make its way too quickly throughout the body of sedentary workers everywhere. A notable fact in connection with this changed regimen is that it is one which is also very much more easily provided by nature than the old one. Meat and liquor were costly for nature to provide. Cereals, fruits, and

sugar are provided with relative prodigality. The cost of an efficiency standard would be far higher than it is if we still persisted in trying to supply the needs of the population with the old kind of diet, rather than the new one.<sup>1</sup>



An industrial clinic. Another form of so-called "welfare work," appreciated by some workers, resented by others! (Courtesy Ford Motor Co.)

Along with these changes which are greatly affecting the health of the community has gone a great increase in the effort that is given to the study of public health. The new science of public health

is conceived in entirely different terms than the old science of medicine. The idea of the old-fashioned physician was to make people well after they got sick. The whole idea of the public health doctor is to prevent them from ever getting sick. His activities are beginning to extend into all the departments of

<sup>1</sup> Cf. the discussion in Chapter 28 below upon the group uses of income.



modern life that affect the health of the community. He is even beginning to have a say concerning housing and factory planning. A great many industries, for instance, maintain medical departments for the purpose of advising them in these matters. Many even maintain a visiting-nurse service which cares for employees when they are disabled through sickness.

But this is not only a matter which has received attention at the hands of private business. Municipalities and many other institutions, such as hospitals and schools, have gone in for the study of public health. They maintain many clinics which give free medical examinations and even provide, in many cases, free hospitals, especially for children. It is almost true to say that in any large city now, hardly any one needs to be seriously ill without medical assistance of some kind. Necessarily, of course, this is much more true in the cities than in the country districts where it is more difficult to maintain clinics and to provide examination and medical or nursing service.<sup>1</sup>

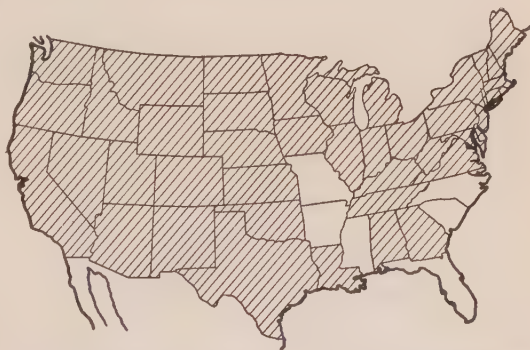
Along with the developments which have looked toward the guarding of the health of the community, has gone a movement for insurance against illness, accident and old age. These insurance schemes are generally of three different kinds:

1. That provided by Workmen's Compensation Laws.

2. That provided by commercial organizations and benefit associations.

3. Compulsory health insurance.

Workmen's Compensation Laws are obviously based upon the notion that industry, being responsible for accidents



All states except the white ones here have adopted some form of compensation for injury to workmen. Investigate the reason for the white spots.

that happen to workmen in its service, ought to bear as part of its cost of production the expense involved in reconstructing an in-

<sup>1</sup> *Public Health in the United States*, by Harry H. Moore.

jured workman. Some such insurance scheme is in force in forty states and affects some 8,500,000 wage earners at the present time.

There is perhaps less significance to be attached to insurance provided by commercial and private organizations, though statistics are not available for its exact measurement. Compulsory health insurance prevalent everywhere in Western Europe has made very little headway so far in American legislation, though it has been extensively discussed and favorably reported in a number of states. Pennsylvania is the only state that has made provision for insurance against the hazard of old age. The experience there seems to be very satisfactory.

Aside from these means of guarding the health of the community there has been a considerable movement toward the establishment of negative standards by state boards of health everywhere. This is done under the police powers which permit them to make whatever provision is necessary for regulation of industry in the interest of the public welfare. Industrial establishments are inspected, safety devices stipulated, municipal milk supplies are carefully

examined, public eating places are regulated, and many like measures are taken to strengthen the work of public departments of health.



A playground equipped with modern apparatus and under the supervision of a trained director affords some relief from the hard conditions cities furnish for children. (Courtesy Playground and Recreation Association of America)

## 2. Recreation

The cutting down of the hours of work in the United States has left a greater and greater part of each day and of each week available for recreational purposes. Also, so far as children are

concerned, the decrease of child labor has made it possible for more children to participate in the activities which contribute to their

health and growth. The modern forms of organized recreation are of two kinds. In the first place, there is a great development of outdoor recreation and in the second place an equally great development of such indoor activities as moving pictures, concerts, theatrical presentations, and dancing. Obviously, of these, the more desirable sort are those which take a population, which does its work indoors, into the open for the exercising of mind and body in reconstructive activities.

The organized development of outdoor recreation has perhaps



Hiking party in Mount Rainier National Park—ideal recreation for an indoor nation. (Courtesy National Park Service)

gone further than most people realize. It has, of course, been greatly stimulated by the development and the cheapening of automotive transportation. Municipal and state authorities and even the federal government have established free public parks where people may go for play, or even, in the case of national and state parks, may camp for the entire summer season if they like. There are now nineteen of these national parks, comprising upwards of eleven thousand square miles in area, which are used to a greater and greater extent each year.

The number of visitors to Yellowstone National Park, ordinarily one of the most inaccessible of all the national parks, rose to 138,000 in 1924. For the same year, admissions to all national

parks ran to nearly one and a half million.<sup>1</sup> This gives some idea of the extent to which people are taking advantage of the opportunity for this form of recreation. States as well as the federal

THE NATIONAL PARKS<sup>2</sup>

NATIONAL PARKS IN ORDER OF CREATION	LOCATION	AREA IN SQ. MI.	DISTINCTIVE CHARACTERISTICS
Hot Springs, 1832....	Middle Arkansas	1¼	46 hot springs possessing curative properties.
Yellowstone, 1872....	Northwestern Wyoming	3,348	Geysers; boiling springs; mud volcanoes; petrified forests; Grand Canyon of the Yellowstone.
Sequoia, 1890.....	Middle eastern California	252	12,000 sequoia trees over 10 ft. in diameter, some 25 to 36 ft. in diameter; cave.
Yosemite, 1890.....	Middle eastern California	1,125	Valley of world-famed beauty; lofty cliffs; many waterfalls of extraordinary height; 3 groves of big trees
General Grant, 1890...	Middle eastern California	4	Created to preserve Gen. Grant tree, 35 ft. in diameter.
Mount Rainier, 1899.	West central Washington	324	28 glaciers; 48 sq. mi. of glacier, 50 to 500 ft. thick.
Crater Lake, 1902....	Southwestern Oregon	249	Lake of extraordinary blue in crater of extinct volcano; sides 1,000 ft. high; lava; fishing.
Wind Cave, 1903....	South Dakota	17	Miles of galleries and chambers containing peculiar formation.
Platt, 1904.....	Southern Oklahoma	1¼	Many sulphur and other springs possessing medicinal value.
Sullys Hill, 1904.....	North Dakota	1¼	An important wild-animal preserve.
Mesa Verde, 1906....	Southwestern Colorado	77	Most notable, best preserved prehistoric cliff dwellings.
Glacier, 1910.....	Northwestern Montana	1,534	250 glacier-fed lakes; 60 small glaciers; precipices thousands of feet deep.
Rocky Mountain....	North middle Colorado	397½	Heart of Rockies; snowy range, peaks 11,000 to 14,255 ft. altitude.
Hawaii, 1916.....	Hawaii	186	Kilauea and Mauna Loa on Hawaii, Haleakala on Maui.
Lassen Volcano, 1916..	Northern California	124	Only active volcano in U. S. proper; hot springs; mud geysers.
Mount McKinley, 1917	South central Alaska	2,645	Highest mountain in North America
Grand Canyon, 1919..	North central Arizona	958	Greatest example of erosion in the world.
Lafayette, 1919.....	Maine Coast	8	Group of granite mounts on Mt. Desert Island.
Zion, 1919.....	Southwestern Utah	120	Zion Canyon 800 to 2,000 ft. deep.

government are establishing parks of the same sort which are particularly available, of course, for motorists and have the advantage of being closer to the great centers of population in the east, which, perhaps, need contact with the out-of-doors more than Western people do.

The Allegheny State Park on the northern border of the state of Pennsylvania and the southern border of the state of New York, in the hills and forests on the western side of the Alleghenies,

<sup>1</sup> *Report of the Director of the National Park Service, 1924, U. S. Dept. of Interior.*

<sup>2</sup> *The World Almanac, 1925, p. 558.*



is a good representative of this type of public camping center. One disadvantage of the national parks has always been that they were so far away from the centers of population. Congress is taking steps to remedy this situation by establishing new national parks in the East as well as in the West. Already there is a definite movement under foot to establish such a park in the Blue Ridge Mountains and one in the Great Smokies of Tennessee. In this day of the universality of the motorcar these centers of outdoor life are becoming of the greatest importance to the whole population.

For the most part, however, national and state reservations can only be visited during the summer months and for very short periods of time by most workers. For them, therefore, the most important development is that of parks which lie very close to their homes. Here municipal playgrounds are an important feature of life. During the year 1921, for instance, nearly \$9,000,000 was spent by 458 cities for the maintenance alone of playgrounds and recreation centers. In addition to this more than \$5,000,000 was voted for bond issues for recreation purposes. A daily attendance of considerably more than 1,000,000 children is reported by 407 of these cities. These playgrounds, of course, are of the greatest importance to children; but cities are not overlooking the possibility of development for adults of such outdoor activities close to home as golf and tennis. For instance, in Chicago, during 1922 more than 1,000,000 tickets were issued for golf alone and it was reported by the starters in the park that several times that many would have been issued had there been room to play. Special play activities were reported by the same 502 cities as follows:

	Number of Cities
Boy Scouts.....	234
Camp Fire Girls.....	139
Girl Scouts.....	138
First aid.....	126
Folk dancing.....	296
Industrial athletics.....	139
Skating.....	146
Summer camps.....	106
Swimming.....	230
Tramping.....	217

Of this last list one or two items deserve special mention. For instance, the Boy Scouts. This organization teaches boys the

fundamentals of physical normality and has developed a program of activities which keeps them much in the open air. It has grown very rapidly, the membership at the present time reaching very nearly one million. Almost equally important has been the development of the Girl Scout movement, which has a similar reason for existence. Other organizations have also developed programs of recreation. The Y.M.C.A. is one of these. It maintains gymnasiums, swimming pools, athletic fields, and summer camps.

By 1924 it had nearly 400,000 individuals enrolled in its gymnasium classes and employed upwards of 900 physical directors. The Knights of Columbus and the Y.M.H.A. have done similar work with other groups.

It will be seen from this that an industrial system which has driven its workers indoors



Dinner on the trail. In such expeditions boys and girls reconstruct the conditions of early American life and taste, if only momentarily, the zest of pioneer experience. (Photo Hine)

for the most part is also beginning to provide the means for maintaining the physical and mental fitness that can only come from contracts with the kind of environment which the human mechanism was shaped to cope with. There are also many industrial firms which themselves provide some form of outdoor recreation for their employees. Many of them have found that it pays in many ways to devote considerable attention to the development of athletic fields and other recreational centers. A good many urban industries will be found, for instance, which maintain country clubs for their employees or some other means of inducing them to participate in outdoor life.

It was this same impulse that led to the organization of the Playground and Recreation Association of America which was

initiated in Washington in 1906. It has been largely instrumental in popularizing play and bringing about the establishment of municipal playgrounds and other facilities for public recreation. Its activities are rapidly expanding. There seems to be a great power in the movement for taking an indoor population into the open for reconstruction. All forms of sports and activities which have this for their general purpose, show a rapid development and signs of even more strength to come.

### 3. *Education*

It will not be possible or necessary for us here to discuss education at any length; we need simply to say that education has a special function in an industrial society



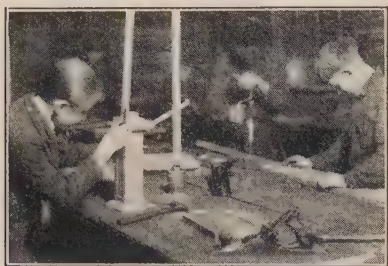
A polo game in Hills and Dales Park, a public park which formerly was maintained by the National Cash Register Company for its employees. (Courtesy National Cash Register Co.)

which it could not have in any other society which has gone before. Its purpose is not purely that of the development of culture or of the genteel attitude toward life. What modern education intends to do is to better adapt children to the realities of modern urban-factory life, not forgetting, however, that education ought to build toward a better future as well as adapt to the present.

One who examined the school system as it exists today might be somewhat discouraged concerning this latter ideal and might feel that education was too largely devoted to training in the technique of industry as it exists at the present time. A good many people are somewhat worried about the disappearance of what were called the old "cultural" studies from the curricula of high school and college. But this seems now, when the disappearance is almost complete, to have been an inevitable development. An education that is not relevant to the life that has later to be led by its student lacks the elements of vitality that are necessary to its continued existence. People will not,

in the long run, tolerate training which fits for a life which they never find.

The modern development of vocational education in elementary school, high school, and college has received its impetus from the need for adaptation to the realities of urban existence; and while it may on occasion have lost sight of this purpose and devoted itself too intensively to training for a particular small task in the industrial system, still, educators have, for the most part, kept their minds on the fundamental idea that progress must come through changes in existing technique, and that, until the existing



Learning to use their heads by learning to use their hands. Vocational education at its best is always directed to such an end. (Photo Hine)

technique has been mastered, improvement cannot be made. The trend of modern education, therefore, is to lead children up through the understanding of the institutions and instruments of industrial civilization until they reach the point where they themselves are sufficiently informed and trained to begin to make their own contribution to common civilization.

Industry has, in a sense, had a remarkable effect on education as a whole. As a matter of fact, education has been made possible by the surplus of wealth built up by the industrial system. Not until there were savings—until more wealth was produced than was used—could there be expenditures for such institutions as our modern schools have grown to be. But also, as we have seen in our discussion of rural education there could not be the pressing need there is today for formal schooling until society had become so complicated as to obviate the possibility of a home apprenticeship which would be an adequate training for life.

The very growth in number of the children provided for in the modern school system has been most astonishing to the uninformed observer. The accompanying table will give some idea of how rapid the growth has really been:



<i>School Year</i>	<i>Population 5 to 18 Years</i>	<i>Pupils Number Enrolled</i>	<i>Teachers</i>	<i>Expenditures</i>
1871.....	12,305,600	7,561,582	220,225	\$ 69,107,612
1880.....	15,065,767	9,867,505	286,593	78,094,687
1890.....	18,543,201	12,722,581	363,922	140,506,715
1900.....	21,404,322	15,503,110	423,062	214,964,618
1901.....	21,982,797	15,688,602	431,783	227,465,664
1902.....	22,278,693	15,917,385	441,819	238,262,299
1903.....	22,655,001	15,999,717	449,864	252,804,081
1904.....	23,028,748	16,256,038	455,242	273,216,227
1905.....	23,410,800	16,468,300	460,269	291,616,660
1906.....	23,792,723	16,641,970	466,063	307,765,659
1907.....	24,262,936	16,890,818	481,316	336,898,333
1908.....	24,613,763	17,061,962	495,463	371,344,410
1909.....	24,239,820	17,506,175	506,453	401,397,747
1910.....	24,360,888	17,813,852	523,210	426,250,434
1911.....	24,745,562	18,035,118	533,606	446,726,929
1912.....	25,167,445	18,182,937	547,289	482,886,793
1913.....	25,587,331	18,609,040	565,483	521,546,375
1914.....	26,002,153	19,153,786	580,058	555,077,146
1915.....	26,425,100	19,693,007	604,001	605,460,785
1916.....	26,846,976	20,351,687	622,371	640,717,053
1918.....	27,686,476	20,853,516	650,709	763,678,089
1920.....	27,728,788	21,732,340	679,274	1,045,053,545
1922.....	28,627,201	23,239,227	722,976	1,580,671,296

It can hardly be necessary, however, to issue a word of warning concerning these figures having to do with the growth of schools; for rapid as that growth has been, it has not been sufficient, and has never kept up with the demands that we make upon the educational system. One measure of the inadequacy of the educational system can be got for instance, by considering the number of part-time pupils in such a city as New York. In this as in other fields of the improvement of modern life we make progress; but that progress is not so great that there is not still need for greater effort and greater expenditure of treasure upon the really valuable institutions of our system.

#### *4. Revised Intellectual and Esthetic Standards*

In any society the matters of most immediate concern are bound to be those we have been discussing. Work, its kinds, and the length of time it requires, health, education, and recreation, are some of these. Nor are we avoiding the problem of better apportionment of income or the consuming of it; these are, however, deferred until subsequent chapters. All of them have to do with the fundamentals of existence. Consciousness of beauty and striving after it are considerations that come after. Yet they need to be worked into the very fabric of existence too.

In older cultures than that of industrialism, standards of the beautiful informed all the instruments of life. Even the humblest furniture of Colonial America had a beauty as distinctive in its way as that of more masterly craftsmen of the time in England.



Whatever is distinctive in our urban architecture can be seen here. But is even the Woolworth Building conceived and executed wholly in the modern spirit? (Photo Ewing Galloway)

And the present generation of Americans is constantly reminded of the beauties of the houses and public buildings of its ancestors. But we misconceive the nature of beauty in life, often, as, for example, when we copy those old colonial houses and their furnishings, suitable once, and, indeed exquisitely fitted to their purpose, but for our day hopelessly unfitted. That we make such attempts is a confession of our own inability to create fresh beauties with our new materials. When we try to make a suburban home look like a seventeenth century farmhouse or a skyscraper to take on the form of a medieval cathedral—as

we often do—we confess ourselves without standards of our own.

Industrial culture has developed so rapidly and the materials we use have shifted so rapidly in our hands, that they have out-run our ideas, which have lingered in the past. So it is that we can often think of nothing to do with wood but make Duncan

Phyfe chairs and nothing to do with steel and concrete but build Greek temples, or Gothic churches. But as industrialism ages, we create new standards of beauty. There evolves the architecture of mass, the polyphonic music, the impressionistic painting, and the new poetic forms that are of the essence of the modern culture.

As we go on we begin to see that it is not enough to develop a material culture, to eliminate poverty, to make efficient factories. Life must not only be made more comfortable for the body, the world must also be made a place in which the spirit can find itself at home. A part of the educational system must devote itself to this purpose. We must have schools of architecture, of music, of painting, and of poetry. And they are being provided for. Not many years ago there were no such things. Now there are many schools of architecture, for instance, in America; and one could not hope to enumerate the examples or to measure the extent of current educational work in the other arts. Libraries and museums have developed in every community. And America supports more than fifty symphony orchestras and 425 choral societies and concert organizations.

But the improvement of this sort is not confined to the arts. There are all the other channels of intellectual advance also, especially in the sciences. In a sense science is to be thought of as an agent of progress, useful for that purpose. But, in another sense, it is to be thought of as a field of human activity which in itself measures progress. It is not only a method but also an art whose devotees need no other reward for its pursuit than is involved in the activity itself. This is just as true of the "social" sciences as it is of the older "natural" sciences. Our industrial society is gradually learning to sustain and encourage these pursuits, not as adjuncts of the economic system, but as ends of life, in all respects the highest of which man is capable. It is beginning also to grasp the notion that ability in these activities is the rarest and most precious possession of the race to be jealously fostered and made aware of itself.

We have progressed now through a discussion of the productive system as an agency for raising the standards of living. We have considered both rural and urban production. We have looked rather intensively at the aims to be realized by production and

how successful this realization has become: (1) the efficiency ideal of more goods per unit of effort expended and (2) the other ideal of making work in itself satisfying and beneficial. We shall now go on to a discussion of some other ways of raising standards, notably (1) by the better apportionment of the goods produced (2) by the better uses of them and (3) the possibilities of betterment there are in the several comprehensive schemes for economic reform that are being prominently discussed at present.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What is the relationship between health and levels of production? Mention some diseases which are peculiar to industry.

2. Is there a housing problem in the cities of this country? Cite the authority for your conclusion. Would better planned cities have any influence on the general well-being of its inhabitants? Mention some specific attempts which are being made in the United States toward making cities to fit man's needs.

3. What is the place of recreation in our present complex industrial system? What are some of the large industrial concerns doing toward promoting the physical welfare of their workers?

4. What has been the influence of industry upon education?



*PART II*

RAISING THE LEVELS OF LIVING THROUGH THE JUST APPORTION-  
MENT OF INCOME



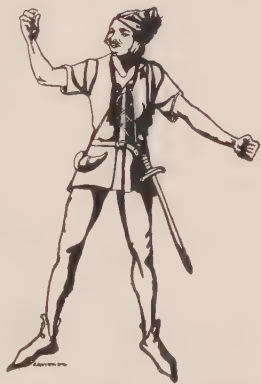
## CHAPTER 20

### THE PROBLEM OF THE JUST APPORTIONMENT OF INCOME

#### 1. *The Development of Present Attitudes Concerning Apportionment*

Few people are so constituted as to approve thoroughly the present modes of the apportionment of society's income. No doubt many are satisfied with their own shares and would not wish any change for themselves, but this is quite a different thing from believing in general that the present situation is morally ideal. One does not have to look far to see the wicked flourishing, at least in worldly goods, and enjoying advantages that they have not earned either by any service to society or by achieving a type of life that is beautiful to contemplate. Still more in evidence are the poor who seem to suffer through no faults of their own; for often they are apparently people of talent, potentially able to do great things if they were possessed of the economic means for developing what is in them. One must be complacent indeed to feel that his own good fortune is a reason for defending such a state of affairs. And, in truth, there are not many who are willing to defend it, though there are many who are not willing either to do anything actively about it.

Reformers at all times, impressed by the obvious unfairness of the apportionment of income, have longed to change it. Perhaps the simplest active remedy ever employed was that of Robin Hood, who blithely advanced with his hardy followers to relieve the rich of their excess gold and distribute it among his friends, the paupers. But in an age of law and order such methods while romantic are impractical, to say the least, and the problem of reapportionment



Robin Hood—who represented one way of effecting a reapportionment of income, simple, but somewhat drastic.

is decidedly more complex than can be handled by these direct and simple means.

Students of social welfare are by no means agreed that it is well for society to undertake to rearrange the apportionment of economic goods at all. There are and always have been several arguments directed toward proving that society should let well enough alone. One may be inclined, skeptically, to feel that oftentimes these arguments have been in the nature of special pleading to justify selfish interests.<sup>1</sup> But the arguments are too plausible to be dismissed with this simple answer.

In the first place, it has been widely argued ever since the Middle Ages that the present condition of humanity is divinely ordained, and that it is not only unwise but irreligious to attempt to meddle with God's plans. The Church might deplore and pity poverty; it might hand out alms and praise the wealthy noble who distributed an occasional dole to the beggar at the gate; but it could not countenance any attempt at revolutionary alteration of the existing ownership of wealth. The existence of poverty was regarded as simply one aspect of the problem of evil in the world, along with sickness and sin. One might wonder why God had created poverty but should not question his wisdom or ultimate benevolence in doing so. Perhaps his aim had been to chasten the world through suffering or perhaps, even more likely, to reward the superior members of society, because the possession of wealth was in itself a sign that the Creator had considered one worthy to possess it. Anyway, puzzling as the situation might be, the pious attitude was to tolerate it, alleviating suffering a little where convenient, and to trust that eventually justice would be done—if not in this world, then in the next. Thus, the established church, secure in its possession of prosperous lands and abbeys, has usually allied itself with the nobility or the industrial ruling class in defense of the status quo.

In the eighteenth century the social revolutionists attempted to turn this argument of divine right against its authors. God had intended, they said, that every man should have life, liberty, and the pursuit of happiness. Every one, therefore, had a divine or natural right to at least the means of livelihood. This argument

<sup>1</sup> Cf. A. B. Wolfe, *Conservatism, Radicalism and Scientific Method*, Chapter IV (Macmillan, 1924).



inspired them with the moral courage to attempt an overthrow of feudal wealth, in that it allowed the revolutionists to feel that they were not assaulting a divine arrangement of things. But the issue was obviously one that could not be settled by theoretical argument since no one could prove, either by scriptural quotation or otherwise, what the divine plan had been.

Associated with these revolutionary doctrines, especially in the minds of such early individualistic economists as Adam Smith,<sup>1</sup> was the belief that it would be more advantageous to allow nature to take its course. Mixed with religious faith, there was arising a spirit of optimism based upon the achievements of human progress, and upon the prospects of natural science. Later, with the acceptance of the theory of evolution, which taught that man had spontaneously progressed upward from the lower animals and through a state of savagery, it seemed more than ever likely that, whatever temporary evils existed, the forces of nature could be relied upon to correct them of their own accord. Darwin, moreover, had argued that this progress had come about through the elimination of the unfit, of the inferior individuals in each generation.<sup>2</sup> Taking this idea over into economic life, one might infer that it would be well to allow poverty and starvation to destroy the weaker members in each age, heartless as it seems. Thus a new generation of supermen might be expected to arise.

## 2. *Rights vs. Consequences in Apportionment*

All of these beliefs survive today in some less extreme form. It is generally believed that a man has a *right* to his property, and that a government is in some way trespassing upon that right, inflicting an injury upon him, if it takes that property away. Also, without going to the extreme of advising ruthless elimination of the weak, many people believe that it is best for society to tolerate poverty for the sake of other good conditions to which it is essential. Above all, one must recognize the sanctity of private property not only because of men's rights in it, but as a valuable achievement of humanity as it progressed from primitive communism. The hope of gaining wealth, it was argued, stimulates enterprise and brings out the latent abilities in the strong and intelligent;

<sup>1</sup> Cf. this first great book on Economics, *The Wealth of Nations*.

<sup>2</sup> Charles Darwin, *On the Origin of Species*.

some unfortunate persons must suffer for the sake of social advance. On the whole more is gained than lost.

Humanitarian theorists who have desired to combat these complacent beliefs usually have done so with rather unconvincing arguments. Clergymen still try to prove that the injustice is a violation of God's will and that the poor have in some vague way a right to more than they are getting. The socialist, the anarchist, and the communist likewise are prone to appeal to moral rights to justify their proposed redistribution of wealth. Attempting to prove that all wealth is produced by labor, they insist that labor has a right to all wealth. It is easy, then, for the capitalist to

reply that they have overlooked the function of capital and skilled management in producing this wealth. Thus the whole question is once more confused.

In short, the concept of rights gives no clear basis for reasoning about the apportionment of income. It is almost impossible to prove any one's inalienable right to anything. If we appeal to existing property rights and trace them back to their historical origin, most of them are lost in doubt at the source. They usually are found to have been established in the first place by some altogether indefensible act of violent seizure, if only from an original savage owner; or quite as indefensibly to a royal grant

from some king whose right to make such a grant is itself dubious. In any case, the question arises, why should twentieth century society be bound by such doubtfully established conventions? Why should it attempt to base its actions, of such consequence to living men, upon the questionable rights of an irrelevant past? If, again,



Countless individuals, urged by the hope that luck may be with them, drive tunnels and sink shafts in the search for gold. Few succeed.

we look at the processes of acquiring wealth that are going on at present, trying to find out who is really earning this or that item of social income, and thus who has a right to receive it, we are still involved in a maze of difficulties. It is almost impossible in our complex order to trace the productive origin of a single item of wealth to any one individual or even to any one group. Moreover, as will be shown in a later section, the acquiring of wealth at the present day depends in large part on various sorts of luck, and not only upon ability. And luck as a basis of legal rights is too questionable altogether to form a basis for social rule.

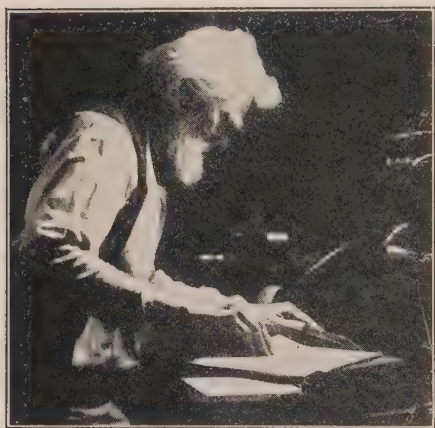
The disposition of some theorists, but more especially men in the street, still to argue in terms of rights is a sign that the lesson of Bentham's Utilitarianism, advanced over a hundred years ago, has not yet been thoroughly learned.<sup>1</sup> In order to get anywhere practically, the reformer and the theorist must look, not to rights, but to consequences; in other words, not to the past but to the future of society. This way of looking at things has, in fact, become very prevalent in certain fields. If people discuss, for example, whether or not the House of Lords should continue to exist, few of them would argue on the basis of feudal rights; they would attempt to show that the House of Lords can in some way carry on a useful and beneficial function in government. In other words, there is no demonstrable reason why twentieth century society should refrain from doing what seems to be for its interests as a whole or for the interests of the majority. Concerning the question of the apportionment of income, there is no bond restraining society from wiping out supposed individual rights and disposing of its collective wealth for the interests of all. And this fact, as we shall see, is becoming more and more widely recognized by all those who are not confused by the desire to defend their own perquisites under the present system. In our future discussion, then, we shall not ask who deserves or has a right to the greatest incomes, but rather what are the probable results of allowing one man or one group to have so much and another man or group so much.

### 3. *Industrial Incentives and Apportionment*

Here again it is possible for the defender of the status quo to

<sup>1</sup>The great foundation work of nineteenth century Social Science was Jeremy Bentham's *Principles of Morals and Legislation*, published in 1789, twenty-three years after the publication of *The Wealth of Nations*.

urge that it is for the best interest of society to provide for the stimulation of enterprise by allowing free competition to take its course. There is much to be said for this argument and it deserves to be taken seriously. It implies a psychological theory of motivation: in other words, a theory of what it is that inspires people to exert their greatest possible efforts. It implies that hope of the present rate of gain is an inducement that is necessary if we are to have economic prosperity. Now this psychological theory is not beyond question. The criticism has been made of it that, although the hope of gain is admittedly a large factor in



Is it hard to believe that this ancient would rather be at his work than anywhere else in the world? (Photo Hine)

securing effort, it is not the only motive. Even if this motive were entirely eliminated some people might continue to work—perhaps not so strenuously, but with some enthusiasm—because of their enjoyment of the work for its own sake. Other motives, such as the desire to win honor and respect in society, and the pleasure of coöperating with others in a collective enterprise, might also be relied upon to secure some effort. Suppose, then, that the motive of gain were not en-

tirely eliminated but merely diminished; that some limits were set to the amount which an individual could amass. Sufficient incentive might still exist to call forth all the necessary effort.<sup>1</sup>

Granting even that the effort to speed up industrial activity might be a little less keen, would this be an unqualified loss? Certain philosophers, especially those imbued with the quietism of the Orient, often charge us with a frantic and excessive zeal for material advance. If there is anything in such criticisms it might be desirable to deflect some of our social energy into fields other than material production. Most Americans would not admit

<sup>1</sup> Cf. the discussion in Chapter 11 above.



the criticism to be a valid one. Mostly our western philosophies are philosophies of achievement and activity. But it might be well to ask ourselves occasionally whether our activities are getting the results we require of them or whether we are in some measure imitating the imprisoned squirrel in his revolving cage. Much of the effort induced by the lure of profit does not, perhaps, benefit society adequately in return for the expenditure of energy. It is quite possible to produce an excessive amount of goods. It is quite possible that struggle for wealth may be largely unproductive even of material gain for society, as in the case of competition among middlemen for patronage.<sup>1</sup> The argument that the present system of apportionment is necessary for social welfare and especially for the supplying of incentives to productive effort must therefore be regarded as unproved and probably exaggerated, although containing perhaps a certain element of truth.

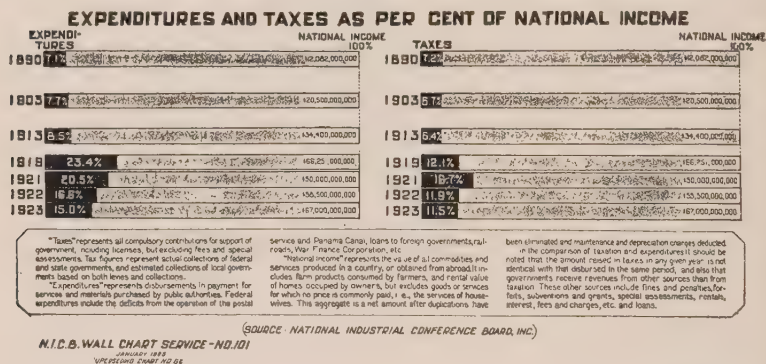
#### 4. *Governments Involved in Apportionment*

But, even were it desirable for governments to refrain from taking a hand in the apportionment of wealth, it would be impossible. Absolutely free competition as it is ideally conceived is and always has been nonexistent. Large groups of individuals, corporations, and trade unions, are struggling with each other in society's markets for a larger share in the proceeds of industry. But this is not free competition; for admittedly some have distinct advantages even amounting to partial monopoly and where there is monopoly competition cannot be "free." As the fight goes on governments are forced to do more and more in the way of mediation and regulation, in order to prevent violence that would be disrupting to society. It may be the interference is intended only to restore a competition that was once free but is so no longer. But this is just as much an interference with the processes of apportionment as more positive measures might be. The complexity of industrial processes, moreover, necessitates increasing supervision of them by government in order to make the wheels of industry run smoothly. More must be done each year in the way of the legislative regulation of a thousand different phases of industry such as the imposition of taxes and tariffs, the inspection of foods and drugs, and the fixing of prices and standards of service

<sup>1</sup> Cf. Chapter 12, "Making Goods and Making Money."

and quality. The government may embark upon these activities without its individual members suspecting that it is reapportioning wealth, but it is actually and inevitably doing so whether its policies are so intended or not. When industry is as highly organized as at present, it inevitably comes to have almost the same delicacies of adjustment that exist among the various parts of a single machine. Nothing important can be done to production without affecting the apportionment of rewards, and indeed without affecting the ultimate expenditure of wealth and the uses of goods. The government cannot exert any great influence upon industrial activity without in some way allocating income to this individual or group rather than that.

Two inferences are clear from these considerations. In the first place, it is no longer necessary to argue whether or not the appor-



Expenditures and taxes, showing how the government shares in apportionment. (Courtesy National Industrial Conference Board)

tionment of wealth should be regulated by governments and other social agencies. The fact that it *must* do so and that it actually *is doing so* can be taken for granted. The question is rather *how* it should regulate apportionment and *to what extent*. In the second place, one cannot get far without discussing how apportionment actually goes on under present arrangements. What is this process by which goods are distributed as rewards among the members of society at various rates? Or rather, since it is not a process by itself, but merely a part of the industrial process as a whole, how

does this industrial process come to confer large incomes upon some individuals and small ones on others?

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. State in your own terms what seem to you to be the main issues in the problem of apportioning income justly.
2. Is the present system of apportionment satisfactory? Is it permanent?
3. How does the belief in private property influence the solution of the problem of apportionment?
4. Is there a tendency here or in Europe toward an apportionment of income according to needs rather than rights of ownership?
5. What part does freedom of enterprise play in motivating man in the economic process?

## CHAPTER 21

### WHAT INCOME IS

#### 1. *Wealth and Income*

The income of an individual consists of all the forms of wealth which flow to him annually to pass through his hands or to be finally used up. These include both material things and immaterial services. A list of the material things obviously would



Some material forms of wealth—factories, warehouses, office buildings, steamships, railroads. These are income, made liquid and transferable by “securities.” (Photo Ewing Galloway)

include such items as the following: all the varieties of food, of clothing, and of shelter; factories, warehouses, office buildings; steamships and railway trains; flowers, furs, and perfumes; wool, cotton, and wheat—and so on throughout the catalogue of the world’s economic goods. The immaterial services would include



the surgeon's skill, the painter's art, the actor's talent for entertainment and the like.

Some of these, it will be seen, are in final form, ready to be used up, to be worn or eaten or enjoyed in other ways; some of them are in a final form to assist in further production (factories, machines, and tools); and some are in a raw or intermediate form on their way to becoming goods that later may be used in final consumption. The question arises: are all these to be called income? The answer is that they are. All of them are owned by some one or by some group, and the evidence of this ownership exists in the form of certificates of ownership which are, as we say, negotiable. This means that one can sell them, and with the money received can command consumable goods. Anything that enables us to command goods is income. And all the products of industry are, therefore, income in every sense of the word. We may not consume all of them finally and at once. But that is because we choose to use them as the instruments of further production—to consume them in industry. They are not the source of immediate enjoyment to some individual or family, but they will result on the whole in greater enjoyment for individuals and families in the future.

## *2. The Part That Money Plays*

This leads us to make the general statement that practically all our income, in modern society, comes to us in the form of money, and is by this device made fluid or interchangeable, which is to say that it may be transformed at the will of the recipient into any of the forms of wealth we have enumerated above. It may be spent, for instance, or it may be saved. If it is spent it goes for something to be used up immediately—to be enjoyed; if it is saved, it is perhaps invested in securities or in insurance of some kind, or, it may be, it is intrusted to the care of a bank. In any case, if it is saved, it is simply spent by another person for another purpose—by the businesses to which the bank makes loans for the factories or the raw materials or the machinery for carrying on industrial operations.

All this really marvelous fluidity is achieved through the medium of our exchanging mechanism and by the simple device of making money the common denominator of every good and service that

is generally available in the community. The fact that money is so useful a device often leads the uninformed to the not unnatural conclusion that money in itself is a good. For do we not speak of So-and-so as having so many dollars and as "being well off"? True we do; but what we mean, really, is that So-and-so possesses so many dollars' worth of purchasing power which is liquid and may be made to command whatever goods he will. As a matter of fact money in itself is of no use for consumption; and income expressed in money terms does not indicate the enjoyment that is to be had from it; only when the money has been transformed into goods can we begin to see what is the real income of the person or the group possessing it. For this reason, problems of the apportionment of income involve not only the partition of the money income but also the partition of the goods income of society.

### 3. *Contrast Between Money Income and Goods Income*

This is made clearer by contemplation of the fact that a person or a group actually may have a comparatively large money income and yet be poor in goods; or may, in contrast, have a small money income and yet be able to maintain a fairly high level of living—to have comparatively large receipts of food, clothing, and the other things we live by. There are two reasons for this. One of them is that we differ in our ability to turn our fluid incomes into goods—we are more or less wise in choosing, more or less efficient in spending and using.<sup>1</sup> The other is that the dollar itself which we use as a common denominator, has as its standard a certain weight of gold, and that gold itself is variable in its power to command other goods in exchange for itself. So that if one has five dollars to be spent or saved now he may be able to buy more goods with them—if he chooses to spend them—than he might be able to buy in a year from now. Contrariwise it may be that if he saves them they will command more goods later on. Obviously the volumes of spending and saving would be affected by the anticipated vagaries of the dollar. And this actually happens. It is no part of our purpose, here, to discuss the value of money, though the student will find it profitable to pursue the problem further.<sup>2</sup>

<sup>1</sup> Cf. Part III for a full discussion.

<sup>2</sup> Cf. for further reading: B. M. Anderson, *The Value of Money*, or Foster and Catchings, *Money*. Cf. also *supra*, Ch. 17.

It is merely pointed out that money income may not be wholly indicative of the size of the goods income because of the fluctuating power in exchange of the very dollar itself.

These latter considerations are important because practically all our income reaches us in the form of money and is expressed first in dollars; and also because the numbers of dollars that come to us are determined by the various mechanisms for exchange which have grown into the very fabric of industrial society. There is a market for almost every good. There is even a market for money. And the essence of market is that there exists a buyer and a seller. We all of us take many things to market and come away with many other things. Whether we come out generally well or ill in these market transactions of ours determines whether we shall have a large or a small number of dollars to be translated into goods. Here again we have to take account of the unstable dollar; for what we have gained or lost in the market in dollars may be shifted before our transformation of the dollars into goods is completed.

The study of income apportionment has to consider all these matters. Obviously, however, we shall have to consider only the broad aspects of the whole distributive problem. Because of its extreme complexity, for instance, we cannot pursue further the idea of the shifting power of the dollar. We shall have to confine ourselves to a consideration of the ways in which relative advantages are gained in the markets of society, and incomes thus determined, for all persons as individuals or as members of social groups which receive collective income.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Is there any difference between wealth and income? How do we usually measure income?
2. What part does money play in the business and industrial activities of our present system?
3. What is the difference between money income and goods income? Which is "real" income?

## CHAPTER 22

### HOW INCOME IS APPORTIONED

#### 1. *By the Position of Relative Advantage Gained by One Party or Another to Price Transactions*

In general what gives an advantage in any market situation is power over either the supply or the demand of the product being dealt in. Perhaps the most usual advantage is the *control of supply*. When it is possible to restrict the amount of a good that comes into the market and when the desire for it is still undiminished,



Diamond mining near Pretoria, South Africa. There are few better illustrations of the power to limit supply. If all the existing stock of diamonds were to be suddenly thrown on the market there would be a decided decline in price, to the advantage of buyers but to the disadvantage of sellers. (Photo Ewing Galloway)

there is certain to be an increase in its price. And this increased price goes to the owner of the good in exchange for the transference of his rights of ownership.

Monopolies of all kinds use this device for increasing their



incomes. But one need not be a monopolist to have an advantage in the market, for this is an affair, often, of slight advantages rather than great ones. Whenever the supply of a good is diminished, there is an effect upon the price of it which is beneficial to its owner. The power to reduce by a hundred bushels the normal daily supply of potatoes in New York City would influence the price, though the influence might be so slight as not easily to be discerned.

It is worth noting that this price is paid by buyers because they are forced to buy and because their bargaining position is weakened. This weakness is the direct result of the fact that there is less than is wanted of the good.

This is relative too, for there is scarcely ever a situation when, if there were no price at all—if they were free—almost any goods or services would not be demanded in immense quantities. It must be obvious that when we say the buyer's position is weakened by a diminished supply, and that this weakness is the result of the fact that there is less of the good than is wanted, we mean to say *less than is wanted at the old price*.

At the old price not every one can share in the product. There would not be enough to go round. And the attempts to share in it, which are registered on the market by the offers of buyers, result in an increase of the price; this discourages a sufficient number so that all who are willing to pay the newly established price can have their desire gratified. But this is all to the advantage of the seller, for he receives the increased price and thereby has his income enlarged.

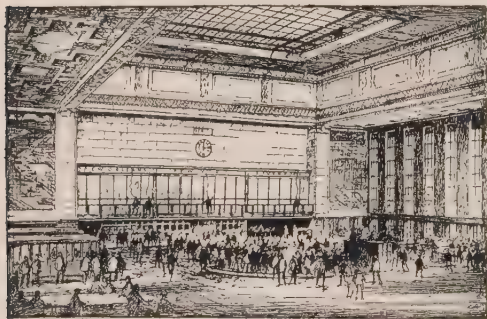
This simplifies almost beyond recognition the actual market transactions of our economy, but it does serve to generalize the results. Many markets are, in a sense, hidden markets. Often we do not realize that we are measuring strength against sellers when we are buyers, or against buyers when we are sellers; but we are. The results may not be at once apparent; they may come out only in the very long run; and the forces that make them may, therefore, be very obscure. But the services that all of us render and the goods that all of us sell have a price placed upon them in some fashion, and the size of that price determines our gross incomes. Then by the reverse process we help to price the goods we must buy, and the prices we have to pay help to deter-

mine how great a quantity of them we can have. Our *necessary expenditures* subtracted from our *gross incomes* show how much our surpluses are, that are available for improvements of consumption, or for savings.

Any one who owns any part of a good that is limited in amount possesses a certain advantage in the market. This advantage can only be gauged at its real income-producing power when the desires of buyers are finally registered in the market, however. Then it is possible to tell whether the advantage is a strong or a weak one.

## 2. *By Speculative Anticipation of Price Changes*

Another way of increasing income that is very common in our economy is the *speculative anticipation of changes in supply*. For when such a change can be forecast with anything like certainty, the forecast can be used as the basis of dealing in future contracts for the good involved. There is a very highly elaborated system of market exchanges for just this purpose; and a good deal of effort is spent in various ways to predict accurately what is likely to happen to supply. If supply changes, price will change, moving either up or down as the case may be. And one may buy if he thinks it will rise. If he has judged correctly, he will gain.



Interior of New York Cotton Exchange, one of the best known market exchanges in the world. (Courtesy N.Y. Cotton Exchange)

There is a social purpose served by this speculative function. If speculators, anticipating a shortage, say, of wheat, when the crop comes in, buy briskly for a time, the price will surely rise; and the very fact of its rise will tend to check buying. So the consumption of the good is retarded in advance of the actual shortage that might occur. Similarly if it is anticipated that the price will fall, and if speculators begin to unload or to "sell short"—that is to contract to deliver wheat in

advance of the actual shortage that might occur. Similarly if it is anticipated that the price will fall, and if speculators begin to unload or to "sell short"—that is to contract to deliver wheat in

the future that they do not yet own, but which they expect to be able to secure cheaply since the price is expected to fall—consumption is stimulated and the stocks of the goods are used up before the new flood reaches market.

Speculators, of course, do not perform this function because there is a social purpose served by it; but rather because, if they are clever, they can enlarge their incomes from it. This speculative anticipation is not confined, either, to professional brokers. All of us anticipate more or less and accommodate our buying and selling activities to the changes we expect to occur.

### 3. *By Being Placed in a Lucky Situation*

One other important way of increasing income through the control of supply must be mentioned. If it is true that many of us make *conscious efforts* to anticipate what is going to happen and so place ourselves in a position in which we shall benefit from the price changes that are expected, there are also many of us who, *without any thought of the matter*, find ourselves in such a situation. This fortuitous or “lucky” placing in a favorable situation has, of course, the same advantages for the individual as though he had planned it. Suppose, for instance, that one happens to be a sugar merchant who customarily has ten thousand bags of sugar on hand at certain seasons of the year; and suppose that just at the time when the storage is at a maximum, the price moves up one or two cents a pound. There is an enormous “lucky” profit. It was not planned, because nothing of the kind had been anticipated and nothing had been done to bring it about. It just happened, perhaps, that there was a storm in Cuba or Louisiana which destroyed a part of the growing crop and so brought about an unexpected shortage.

The business cycle has been explained in a previous chapter as a movement, in rhythmic fashion, of the various forms of



“Lucky profit” in oil is a conspicuous illustration of the part fortuitous advantage plays in the apportionment of income.

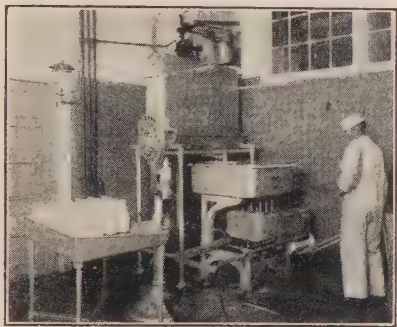
business into prosperity and depression and into prosperity again. It manifests, among other characteristics, shiftings in the levels of price, activity and stagnation in manufacturing, and overwork or unemployment for laborers. This cycle, which is continuous, but so irregular as to be unpredictable in the exact time and quantity of its movements, is perhaps the greatest single element of uncertainty in our system and causes the greatest amount of lucky gain or loss to all the individuals of society. For no one is exempt from the influence of its changes. Owning goods when there is prosperity, when every one wants them and when prices are high, is a very fortunate thing; but owning them when their prices are falling is equally unfortunate. One is likely then not to be able to dispose of them even at "cost" and is apt to have to accept a loss.

This cycle in business, is, however, by no means the only way in which fortuitous gains or losses of income are made. We may merely mention a few others. Farmers in one part of the country count themselves fortunate when there is a crop failure in another part; any invention of new processes or machines may suddenly cheapen the making of a good; one may own a piece of land upon which coal or oil is discovered. Even the fact of being born with extraordinary talents, for which society happens to be willing to pay well when one happens to be alive, is in a sense the good fortune of the individual. All these furnish a control of supply that helps to increase income, and that without any particular foresight, effort, or achievement on the part of the recipient.

All this may, again, not involve the control of supply, though control of supply is perhaps more usual. It may take place through the *control of demand*. It will easily be seen that one is in as good a position to take advantage of one's competitors if he controls the demand for a product as he would be if he controlled the supply of it. He limits the places in which it may be sold and the amounts that may be disposed of and so tends to reduce the prices of the goods he buys. This makes as real an increase of income as the other method. Consider, as an example, the position of the meat packers in Chicago or that of the market milk dealers in almost any city. If the people who own fatted animals or who have milk to sell wish to dispose of them at all, they can do it only through the organized market, which is controlled by a limited



group. And this limited group, controlling the sole practicable market, can hold the price down so that a distinct advantage is gained. The seller is relatively weak when there are few buyers, and he is therefore in no position to drive a good bargain.



The necessary equipment for the efficient preparation and distribution of market milk involves such considerable expense, that the market is easily controlled by a few middlemen. (Photo Hine)

Changes in society anywhere which affect the prices of the goods under consideration will have as great an effect here in favor of buyers as they might have, under other circumstances, in favor of sellers. The difference is, of course, that they have in this case to be changes which cause prices to fall rather than to rise. In every business cycle there is a period, for instance, when there are well defined "buyer's markets" when goods can be

bought at discounts which on the whole may be very profitable to buyers. The important phase of this matter to be noted for our purpose here is that these changes take place and these gains may accrue to buyers through no virtue of their own, but simply because they happen to be in a favorable position at a certain time.

#### 4. *By Dependency upon a Successful Bargainer*

It will be obvious that there are many persons in the community who do no active bargaining as either buyers or sellers on their own account. Such, for instance, are the social dependents of all kinds—small children, the very aged, and the sick or insane in institutions. These neither buy nor sell but have their incomes, in the form of goods, conferred upon them gratuitously either by some individual such as a father, a mother, or a guardian, or by some social group, such as a hospital association or, in many cases, the state.

But there is another large group, also, that has all or part of its income conferred upon it not because of any successful meeting

of market conditions, but simply because of good fortune in happening to be a relative of, or large recipient of benefactions for some other reason, from some bargainer who has accumulated rights to more income than he cares to use himself. A considerable part of the total income of society is thus apportioned to the members of families of wealthy persons or to philanthropic or educational institutions in the form of negotiable titles to property which may be transformed into whatever kind of wealth they happen to desire.

It is by this right of transference, which society allows—with certain restrictions—to good bargainers or to persons who have



Tea time at the Casino, Monte Carlo. "Easy come, easy go" is an old adage which explains the existence of such palaces of pleasure as these in the resorts of the wealthy. Many Americans winter on the Riviera. (Photo Ewing Galloway)

been lucky in bargaining, that the "leisure class" of society, so called, is created and maintained. Its members have calls upon income which they have not directly earned. The dangers from this kind of transference are numerous; among them are the carelessness in spending which goes with easy acquisition

and the establishment of impossible standards for other individuals whose incomes are more limited. There are also the bad effects upon the favored individuals themselves, who are overapt to become slothful and useless so far as the productivity of their lives is concerned.

But it is also true, much income that is thus given to dependents of the industrially successful is quite as well used as though these individuals had earned it. It is not the source of income that counts; it is the consequences of its use. So that when we seem to condemn the apportionment of income to those who have done

nothing to "deserve" it, we mean to condemn only the more usual consequences of this apportionment; and we should have to make an exception of the cases in which this income is well used. For conferred income often goes to the support, not of wasteful individuals, but of charitable and educational institutions whose work is justified by the results achieved. Put to these uses, income often results in an actually greater increase in welfare than might result if it had been more equitably apportioned among "earners" in the first place. For the fact of earning ability is no guarantee of ability to use wisely.

### 5. *As a Result of Superior Productivity*

If it is true that income flows chiefly to the shrewder and the luckier persons and groups, under our present arrangements; and if it is in the various market places of our industrial society that the size of incomes is determined, what becomes of the ordinary notion that superior productivity yields increased income? Is it true that efficiency in production has no determining effect upon income? The answer to this is that superior productivity only yields greater income *as it affects the market position of the producer.*

If we suppose a business firm which is manufacturing, say, shoes for the market, and makes the discovery of some contrivance or process which greatly increases efficiency, the ef-

fect is, of course, to put the firm immediately into an entirely new relationship to the market. It has now reduced the cost of the shoes it makes to the point where it can either reduce the price beyond the level its competitor can reach, and thus get, if it cares to, a



Dusting cotton with calcium arsenate to reduce the ravages of the boll weevil. By increasing productivity the farmer hopes to increase his income. (Courtesy U.S. Dept. of Agr.)

much greater distribution of its product, or it can continue to sell at the old price and pocket the fruits of efficiency. In either case it profits enormously, the measure of gain being the difference between the new and the old ratios of cost to price. This, however, is temporary. Sooner or later others in the same occupation will make use of the same contrivance or process and thus put themselves in as favorable a situation. What may delay this is protection by patent or by the attainment of virtual monopoly, which makes any competition ineffective unless instituted on a grand scale. In the meantime, however, the firm is in a position to make the most of its advantage and will proceed to do so. The profits are, in a sense, the fruits of productivity, because at the same time that the consumer is getting his shoes for the same or a less price, the firm is being enriched.

It often occurs, however, that the superior producer does not receive any considerable share of the rewards of his superiority. An unfortunate position in the market may force him to hand these over to some one else.

It may, perhaps, be good public policy to force a sharing of these benefits with consumers, but we are not so much interested in that problem here as in seeing that superior productivity may increase incomes—but only through the increase of bargaining power in the market.

Here again, if we look into the causes of success, we often find that superior productivity is itself a result of one of the various kinds of luck above mentioned; such as being close to a newly discovered coal mine, or being able, through fortunate bargaining, to command the services of experts. Argument on the basis of rights proves nothing. It may be very true, however, that society can profit by rewarding superior producers, and thus stimulating efforts. This it does by conferring patents and allowing partial or temporary monopolies. But it limits and may be wise to limit considerably the extent of such reward, for fear of excessively handicapping other producers.

#### *6. By the Institutionalization of Advantage*

We come now, in explaining income apportionment, to the important fact that a market advantage, once gained, may become

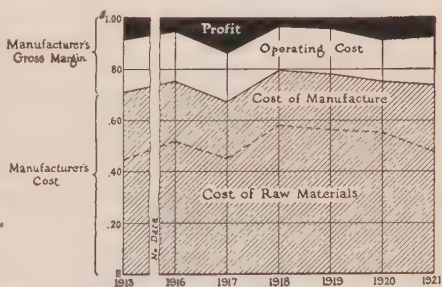


more or less permanent—may become institutionalized. This may happen through the development of *social habit* or it may happen through its *fixation by legislation or charter*. So that, not only does the individual, the firm, or the group, gain from one successful market deal, but it also places itself in a position to gain continuously in similar situations for a long time to come and so, by one effort, insures the receipt of continuous income.

This helps to explain the relative strength in the market of bargainers who may seem to be passive; for once an advantage of this sort is established it requires considerable force to overcome it. Such for instance is the case when a customary price has been fixed for any good or service. We live just now in a time when customary prices are not strongly intrenched in people's minds, but in a period of greater stability the strength of usage becomes very great. The five-cent loaf of bread was one of these customs. It required an exceedingly strong position on the part of sellers to raise the price after its years of immobility, though once the custom was broken, the price might continue to shift upward or downward with much less reluctance. A fixed price of this kind, it will be seen, has the effect of giving now buyers, and now sellers, an advantage. For when they must pay high for their flour, bakers would

like to raise the price of bread; if they cannot, they are squeezed between rising costs on the one hand and fixed price on the other. Meanwhile the consumer benefits. Similarly if the price of the raw materials should fall, the baker's margin of profit would rise (and his income be increased), and the consumer would find himself paying a higher price than he might pay if there were not a customary

price. The secret of the fixed price of this sort usually is that there is a long period of stability of all prices when it is advantageous



This diagram shows how varying expenses react upon the bread manufacturer's profit. The basis of comparison is the dollar which the wholesaler pays for merchandise. (From Report of the Joint Committee of Agricultural Inquiry, H.R. Report 408, Pt. IV, 1922)

to the sellers to have a fixed price. The genuine ignorance of consumers concerning the forces of the market, together with their individual inability to bring much pressure to bear anyhow, also plays a part.

Similar in kind to the fixed price is any kind of fixed habit of use, for a fixed habit is apt to make buyers weak and sellers strong in bargaining and therefore to affect their respective incomes. These rigid customs may be more than habits, really, as when a kitchen has been equipped for gas cooking. Then the bargaining power of the consumer is weak because he nearly *has* to have gas and would not stop using it if the price were to go up considerably. So great is this disadvantage on the part of buyers that public authority interferes in some cases to hold prices down. Railway fares are thus regulated; also electric power rates and telephone charges. The Supreme Court, in permitting this kind of business regulation, uses the phrase "affected with the public interest" and has shown a disposition to permit legislatures to regulate rates and prices whenever consumers can be shown to be at considerable disadvantage in bargaining with sellers of goods and services. Their interests are then "affected" and must be protected by the government.

But fixed habits of use are not confined to those that are of this kind. There are also those that are merely matters of custom, not of necessity at all. Such for instance is the habit of eating bread that is made of wheat, when corn bread would be cheaper and just as nutritious. The advantage to sellers is quite as great, however, when people only *think* they have to have things as when they *really* have to have them.

There are other ways also of getting a more or less permanent advantage in the market that have not yet been spoken of. If consumers can sometimes persuade legislatures to hold down prices of the things they must buy, sellers also can sometimes persuade legislatures to hold up the prices of the things they sell. This happens when a high fixed rate is written into the franchise of some utility corporation such as a street-car or some other company doing a business for which it must have a legislative franchise. There have been many instances of this in the history of American business, especially during the latter part of the nineteenth century, when municipal utility corporations were being formed and when

legislatures were not so particular as they have since become about the protection of the public against the aggressions of exploiting businesses.

The impressing upon the public of the virtues of some heavily advertised good that is trade-marked or patented has this same effect of strengthening the position of the seller and weakening the position of the buyer. Tariffs also may have the same effect. What happens is that the public is stimulated to buy by advertising and the supply of the good is limited by artificial means. This gives the seller an advantage that can only be overcome by extraordinary resistance to persuasion on the part of the consumer.

Then too, there are sometimes discriminatory laws that give one or the other group an advantage. Congress, for instance, has put a tax on the sale of oleomargarine that puts the seller of it into a disadvantageous situation. And there are other instances of laws passed in one state so regulating the conditions of business that costs are made higher than in other states where the regulations are not imposed. This is the effect of the regulation of wages or of working conditions in factories where they differ from state to state. This gives the unregulated seller an advantage that may considerably enlarge his income.

Graduated income taxes, also, are so arranged that they affect materially the apportionment of income. By their very nature, of course, they take a greater percentage from high income receivers than from low ones. Where this principle of taxation becomes firmly established the low-income groups are favored over others and it may be that the upper group will be found to pay most of the public expenses.

Similarly there is considerable evidence for believing that there has been a long-time discrimination in favor of certain social groups in this country and against certain others. Farmers, for instance,



The last-minute rush to pay taxes.  
(Wide World Photo)

have suffered from the policy of protection by tariffs that is traditional in this country and manufacturers and bankers as a class have benefited from it. Banking laws also have been framed usually so that their effects have been to discriminate in favor of bankers and so to increase their incomes at the expense of others. This kind of thing may happen whenever the law-making authority can be persuaded to make it happen; but it ought to be seen quite clearly that any such discrimination has a very real effect upon the apportionment of the social income.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Why is the buyer interested in supply? Is the buyer ever a seller?
2. What is meant by "price transaction"? What is meant by surplus?
3. Is speculation, as a means of increasing income, always socially desirable?
4. How important is the fortuitous element in the apportioning of income? Are there any members of society who are not to a greater or less extent affected by this fortuitous element?
5. Explain the relationship between the ability or power to force a good bargain and the apportionment of income.
6. Which is the more important socially, the source of the income or the consequence of its use? Defend your answer.
7. In what way does superior productivity affect the apportionment of income?
8. Is social habit an important factor in apportionment? In what ways does society gain or lose by the fixing of habits of consumption?



## CHAPTER 23

### INDIVIDUALS AND GROUPS IN APPORTIONMENT

#### 1. *Income Apportionment Partly an Individual, Partly a Group Matter*

It should appear from what has been said that the apportionment of income takes place in the market places of society. And also it should appear that in the bargains that are made there people do not always appear as individuals, but often as groups with like interests. It may be that even when they do appear as individuals, their group interests help to influence their actions. How these groups are composed is evident only from a study of an actually functioning society. Perhaps the most prominent of them are what we call "businesses." Others are labor unions, employers' associations, consumers' coöperatives, families, farmers' marketing associations, and the like. It

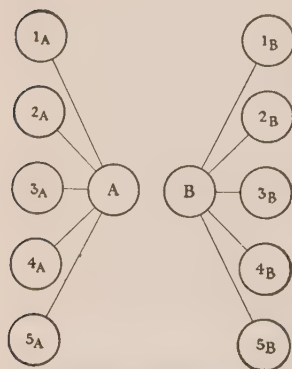


A pushcart market where individual bargains with individual. Yet even here there are the beginnings of groups for bargaining purposes. (Photo Hine)

will be seen that "group" in this sense means simply any aggregation of people that act together in any way which affects the market. People may belong to more than one group; they may even belong to groups that act in opposition to each other, as when a person belongs to a business group and a family or to a consumers' coöperative and a labor union.

When economists formerly spoke of "classes" what they had in mind was a definition of classes as income-receiving groups. They had a conception of these classes as somehow coming into opposition to each other in the process of income apportionment. So wages were fixed by a bargain between the employee and the "capitalist" or the owner of the business in which he worked. This was a true enough description but it oversimplified the process by implying that there were only four kinds of income, wages, interest, profits, and rent, which went to the four corresponding factors of production, labor, capital, management, and natural resources. We are more inclined now to a less simple explanation. We say that there are as many kinds of income as there are kinds of productivity. Any activity or resource which helps to create utilities is productive of income. And the possessor of these

activities or resources is engaged not only in making or using them but in making a bargain to buy or sell them.



This diagram represents, much simplified, group bargaining in modern society. 1A, 2A, 3A, and so on have permitted A to act as their agent in selling; and 1B, 2B, 3B, and so on have allowed B to act in a similar capacity for them. 1A never meets 1B, but a bargain is consummated between them which has an effect on their incomes.

## 2. Group Bargaining

Men group themselves around these productive or consumptive activities and there are formed, as a result, more or less organized and definite markets where valuations are made and the prices paid over. One may have something to sell as an individual, but in modern society there are very apt to be group elements present; indeed, the whole bargain is likely to be made by group representatives, so that the individual appears only in choosing a representative. This can be seen prominently when the selling agent of one concern deals with the buying agent of another. Each represents the whole group engaged in the activities of the

business. It may also be seen when the representative of a labor union bargains with the manager of a factory, the manager

being, perhaps, only a hired representative of the owners—the stockholders.

These are two of the most conspicuous group bargains that take place in our society. A third is that between the final consumer and the retailer. But there are, of course, innumerable others of only less importance. And it is important to see that the group affiliations of individuals shift. One may belong now to one business group and now to another. He may belong now to a labor union and now to a farmers' selling association. His class interests are therefore not necessarily fixed for good and all. Similarly also

groups may shift in relative social significance. For instance,

banking businesses have become more important groups since 1850, and religious groups have declined in social importance since the Middle Ages; families are less significant groups in urban life than they

were in rural life; employers' associations and labor unions play a greater part in the economic world than they formerly did.

But one of the most significant shifts that are going on just at the present time, and one that is likely to be overlooked, is the affiliation together of all those who contribute to the making of a good (the creating of utility) on the basis of the thing produced. If this process goes on it will involve the decline in importance of one of the most costly social struggles of the nineteenth century—that between "capital" and "labor." This struggle between laborer and capitalist has been serious ever since the beginning of the industrial changes of the middle of the eighteenth century. It seems in many prominent instances to be mitigated by the growing movement for ownership among workers, who, when they become owners, become "capitalists" as well as "workers." If this movement should develop its expected proportions the struggle for income apportionment will take place more prominently in the goods markets of the future than in the labor markets. When businesses or even whole industries become finally consolidated groups, with a real unity of purpose and without the old contentions that have been so great a cause of unrest in the past,

1880 2045

1924 6085

Increase in the number of national banks in the United States since 1880. This furnishes some evidence of the shifts that take place in group importance over a period of time. (Statistics from the *World Almanac*, 1925)

there may be a real chance of reducing the bitterness of the struggle for income apportionment. This will be because relations between contributory industries—those that are necessarily coördinate with one another—may be fixed by contract for long periods and may, on the whole, experience indicates, be carried on with less acrimony than those between opposing labor and capital groups.

### *3. The Advantages That Industrial Groups May Have in Income Apportionment*

One advantage that a group may have is dependent upon the nature of the good or service it purveys. If the good or service



Women's dress has always been a conspicuous field for the expression of capricious tastes. The styles are subject to rapid change and the business of purveying them is consequently extremely unstable.

is one for which the public demand is fitful and capricious, it is likely to be a somewhat unstable industry with a high bankruptcy rate, but also with the possibility of immense periodic gains. Women's clothing is of this nature; and so are most goods that might be called luxuries. Expenditures for these are apt to be first reduced when there comes a need for economizing. Being a part of a group in one of these industries may bring great gains for a time but in the long run is risky. Goods like bread, salt, sugar, and common clothing, contrariwise, people always have to have, regardless of what else they must do without. The business of purveying them, therefore, is apt to be steady; and if the profits are low, they are regular. The advantages of this are made plain by study of the types of business that have grown vigorous and strong and have ultimately developed to a gigantic size within the



last few decades. Most of them are engaged in making or handling necessities. On the whole it seems to be an advantage to belong to these producing groups rather than to the other ones.

Another element of difference which may affect the advantages of a business is its inherent capability of rapid adjustment to the general price levels that, in our economy, are forever shifting. If we were to analyze the controlling factors here we should find them to be somewhat as follows: (1) whether the business is situated close (economically) to the consumer or relatively far away, (2) whether the "overhead costs" are great or small, and (3) whether the rate of turnover is rapid or slow. Each of these requires some elucidation.

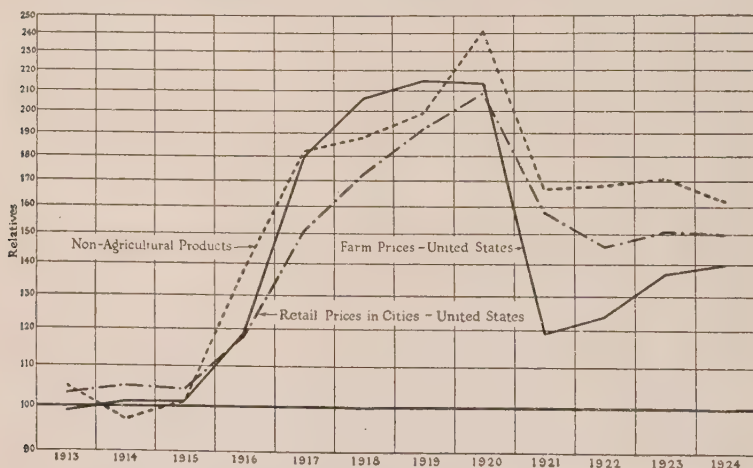
Businesses that are in too close juxtaposition to the ultimate consumer may not be able to make rapid adjustments to a changing price level because of the well-known tendency of retail prices to become fixed or customary. A comparison of wholesale price changes with retail price changes over almost any period will show wholesale prices rising and falling with greater rapidity than retail prices. But also they will be seen to fluctuate much more rapidly than the prices for farmers' goods. So retailers lose by the inflexibility of their prices as well as farmers, those who are closest to the consumer and those who are farthest away. The situation in the middle seems to be the most favorable on the whole, though in a time of rising prices farmers' and retailers, prices may rise more rapidly than manufacturers'. In depression, however—when prices fall—the situation of farmers and of retailers is more unfavorable relatively than was their favorable situation with prosperity and rising prices.<sup>1</sup> The whole matter is too complex for easy generalization, and there would be found to be exceptions to any rule in the matter. But the movements of prices do seem to indicate that the middle situation is the more favorable one. The situation is clearest when the manufacturer is compared with the farmer.

<sup>1</sup> This is to say that one group loses more in the period of depression than it gains in the period of prosperity. It can be seen by comparing the prices charted in the accompanying diagram. If it occurs to the student to wonder how this can be, he will be interested to know that it is because some industries go on selling their goods for long periods below the cost of production. Farmers are notable for this. They go on for long periods selling below cost for one reason because often they do not know their real costs and for another because when they do know, they cannot quit because farming is more than a mere business.

COMPARISON OF RETAIL PRICES, WHOLESALE PRICES OF NON-AGRICULTURAL PRODUCTS, AND FARM PRICES, 1913-24<sup>1</sup>

	RETAIL	WHOLESALE	FARM
1913.....	103	103	99
1924.....	150	167	140
Difference.....	47	64	41
High.....	209	241	215
Low.....	103	97	99
Difference.....	106	144	116

This table shows that prices received by farmers and by retailers fluctuate less rapidly than wholesale or manufacturers' prices. This means that manufacturers make more rapid adjustments to changed conditions than do either of the other two groups, and are therefore in a more favorable situation. Retailers are faced with customary prices and farmers with excessively high overhead costs and slow turnovers of capital. Retail trade has undergone an economic adjustment to this situation by the coming in of chain and department stores; but no such change has taken place in agriculture. The income position of American farmers will remain permanently below that of other groups until some comparable economic reorganization takes place.



This chart shows the course of three price series over a period of years. The manufacturers' superior facility in price adjustment is, on the whole, clear. The great disadvantage of farmers when prices are falling is even clearer. Close study of this chart will pay. Figures are from the same source as the table preceeding.

<sup>1</sup> Figures from *Farm Economics*, Dept. of Agr. Economics and Farm Management, N. Y. State College of Agriculture, Cornell University, Ithaca, Jan. 31, 1925, p. 219.

A manufacturer "turns over" his stock several times a year; but a farmer is lucky to average as many "turnovers" in ten years. This is because much more time is required to mature cows or orchards or even grain crops or vineyards than to make shoes from leather or bread from flour. Likewise the fact of slow maturity means that "overhead costs" will be high because permanent investments must be large. One must go on investing in a New York State orchard for twenty years before he receives much in return; a cow returns her investment only after eight years. And so it goes. But the retailer is in a less fixed situation and a considerably more favorable one than the farmer. If his turnovers are slower than a manufacturers', they are much more rapid than a farmer's, just as his "overhead" is greater in the one case and less in the other.

All this means, to go no further into detail, that a business possesses a distinct advantage in existing in a middle position with respect to the consumers who form its ultimate market. And this advantage is one which is certain to be registered in income. For proof of this, one need only contrast the prosperity of grocers, druggists, clothiers, or, nearly any other group of retailers with that of manufacturers, and then contrast this again with that of the farmers who are the producers of raw material and who carry on their occupations at the greatest relative distance from the ultimate consumers.

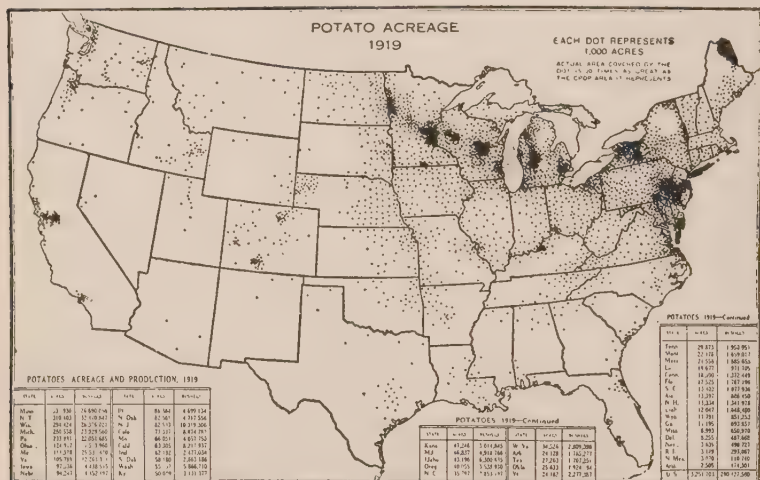
Some groups also have an advantage in their superior cohesion, for cohesion gives very definite market power. The

degree of association seems to be determined largely by the physical conditions of the industry. For instance, to use again the agricultural industry for illustrative purposes, farmers are bound to be



A producing orchard. The investment that must be made is very heavy before returns begin to come in. (Courtesy U.S. Dept. of Agr.)

disorganized by the very fact that they have difficulty in getting together. This is much less true of manufacturers or of middlemen. In the first place they live together in cities; and in the second place their businesses are of a sort to make it advantageous to do business on a large scale even if there were no market advantages in associationism. For these reasons they gradually cohere and form large-scale organizations and farmers do not. Once having formed them, they find a great advantage has been



Potato growing, because its acreage is so widely scattered, offers a good illustration of an industry in which association for better bargaining is difficult. (Courtesy U.S. Dept. of Agr.)

gained in bargaining on the one side with disorganized farmers and on the other with equally disorganized consumers.

Finally, we ought to consider here the relative abilities shown by different groups in institutionalizing their advantages. Plenty of illustrations are available. For example, this country has fallen into the habit of giving tariff protection to its manufacturing industries. This was unavoidable when they were developing and were more or less necessary to the progress of the nation. But now that they are full-grown and stronger than those abroad, even, we continue the protection because we have formed the habit. Similar results follow from strenuous and effective advertising campaigns. Once a habit of use is established it tends to persist



unless something interferes, irrespective of the rationality of the procedure.

The whole problem of income apportionment, it is obvious, is not to be understood by a study of groups and their advantages and disadvantages in the market. For individuals within the same group very often share differently in the partition. So that, besides investigating the situation of groups with respect to income, we need also to inquire into the reasons why it is that the incomes of individuals vary. Why are some bankers richer than others; why do some storekeepers have high net profits and some others low ones; why do some laborers have higher incomes than others?

And we observe at once that there is a grave difficulty involved in disentangling almost any individual's group alignments. He may inherit some income-bearing property; he may have a salary from a corporation; he may trade in some article or render some service "on the side." All these serve to confuse one who is trying to understand the modern situation. If we want really to know the forces that make for differentiation among income receivers, we have to begin with the individual and trace the sources of his income (or his incomes); and then go on to study the advantages possessed by the various groups from which the income flows. Having done this, we may then return to the individual and investigate (1) the reasons for his affiliations and (2) the advantages possessed by him over the other members of his group.

Belonging to a group which has a distinctly favorable situation is in itself perhaps as great an advantage as an individual can



These social casuals need closer analysis than they have ever had. Perhaps Carleton H. Parker's *Casual Laborer* (Harcourt, Brace, 1920) came closest to explaining them; but in any case we can say that the man on this bench is down on his luck. Perhaps he was born deficient, perhaps ill health and industrial strain have used him up. In any case it is an evasion of social responsibility to leave him sitting here. (Photo Hine)

possess. One gets into such a group in various ways. He may be "born" there, so to speak, or he may be helped there by some friend or relative. Again he may, by a combination of brains, luck, and hard work, force himself into it. At best, however, the "luck" element is very great. In a certain sense it is a great piece of good luck to be born with superior abilities. It is still greater luck to be born with the sort of abilities that are valued at the particular time one happens to be living and working. A Benvenuto Cellini would have much less honor in twentieth century America than he had in Renaissance Italy. And Darwin would have remained unknown, as Gregor Mendel did, if he too had happened into the world fifty years too soon.

The differences among the varieties of formal schooling a boy or girl may have are also very sharp. Education may fit one for life; but it thinkably may also unfit one for any kind of life that can be found in the going world. But these are not all. It is the greatest luck of all to be favored by those great socio-industrial changes that sweep over the whole earth. Many a life has been wrecked by a business depression which occurred at a delicate juncture in a business career; many a fortune has been made by owning a piece of land the price of which was enhanced by social development. These changes, so all-important to the individual, are often quite beyond the scope of his understanding, much less the possibility of his control.

The reasons, then, why one belongs to this or that specific group are only to be discovered by knowing the individual's make-up—that is to say, the abilities that enabled him to get there and to stay there and that keep him from getting out—and by knowing as well the circumstances which favored him over others. These are obviously too complex to be gone into further here; and, anyway, it will be seen, they depend in great part upon the study of the individual and the peculiar situation which makes him unique. Also, if we want to know why A is a banker and so receives a large income, but also why B is a banker and receives a greater one, no general principles will be of the slightest help. Only a study of A, of B, and of their influences and their activities will allow us to arrive at an understanding.

All that we can say with any assurance is that the fortuitous element is so large in any career that one simply cannot work out,

in the modern world, any basis for "rights" to receive income either on the basis of productivity—for here we are never productive alone—or on the basis of ownership—for individual ownership titles are apt to have a social reason for being. This dilemma which faces society in its attempt to find the criteria of reform for the processes of income apportionment, brings us to a consideration of the various ways of improvement that have been prominently suggested and seriously considered.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What groups are you familiar with which are organized for more effective bargaining? Show what each group is hoping to obtain.
2. What has the individual to gain from becoming a member of a bargaining group?
3. Is the individual limited to membership in one bargaining group?
4. Will the bargaining effectiveness of a producing group depend upon the nature of its product? Why? What part do consuming habits play in this effectiveness?
5. Do individuals within a particular group fare equally in the apportionment of the group share? How do you account for such individual differences as exist?

## CHAPTER 24

### THE AIMS AND METHODS OF REAPPORTIONMENT

#### 1. *The Possible Aims of Reapportionment*

In describing how income is actually apportioned we have incidentally touched several times upon what the government and other social agencies are doing to reapportion it, or at least to influence the process of reapportionment as it goes on. We have even mentioned incidentally certain other possible public policies: for example, how far it is advisable to regulate prices, to grant monopolies, and to restrict business operations in the interest of public health or welfare. We may now look more directly at this question of suggested policy; in other words, at the question of how the levels of living may be raised by altering the system of income apportionment. This is partly the moral question of what constitutes human welfare: it is a question of what ideals are most worth striving for. But partly, too, it is a practical one of the methods that will best succeed in achieving these ideals.

As to the question of aims or ideals, it is, of course, impossible to prove the moral superiority of any one rather than another. Ethical questions are not susceptible of proof or even of exact investigation. Rather than assume any particular theory of moral ends and base our discussion on it, it will perhaps be more useful for us to take note of a certain trend in public opinion, a certain change that is going on concerning the accepted aims and ideals of economic policy.

To be sure, old ideals are still current and influential, though their origins and their implications are often unrealized by their advocates. People who have not devoted time to theoretical discussion are apt to take as unquestioned dogma certain moral and political principles which they have inherited from the past. Among these still current survivals of past economic thinking is the belief in a certain divine or vaguely occult sanctity surrounding



the individual's right to private property, especially that which has been his or his family's for years, but also including that which he has gained by his own endeavors. But, without definitely abandoning such older ways of thinking as this, people easily come to modify them, to tolerate newer ideals, often inconsistent with the older, and to hold several conflicting beliefs at the same time. That is, along with this vague respect for the sanctity of private property, there exists a considerable tendency for practical men of affairs to think in terms of consequences. Without necessarily committing themselves to an altruistic code of ethics, and without being unusually patriotic or social-minded, they nevertheless, when pressed for reasons, justify their economic views in terms of social welfare. They acknowledge, in other words, the test of consequences as well as that of rights.

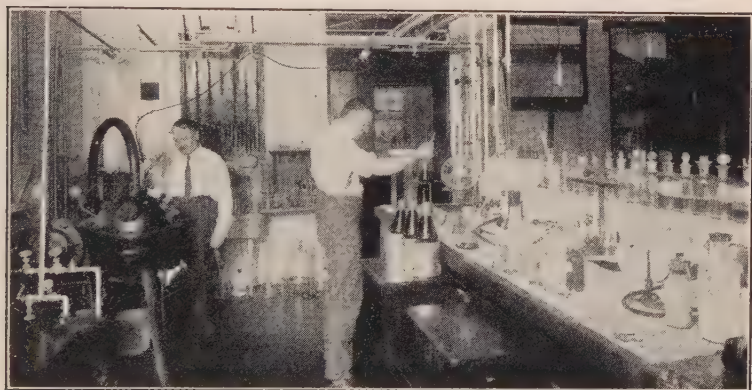
The state of public opinion now or at any other time, including the opinions of statesmen and captains of industry, is usually a mixture, not very clearly or logically thought out, of various current ideals. It is perhaps fortunate that our national leaders are not too logical and consistent, for a man who holds with dogged consistency to one ideal is apt to become a fanatical doctrinaire, and to do more harm than good. At present most nations are blundering through to a certain slow progress and correction of evils, not by any clear and conscious policy but by a process of random trial and error, partly guided by pressure in various directions by various ideals and by various interested groups. People will accept a certain high-sounding principle as unqualifiedly true in theory and act upon it until some other principle, equally high-sounding, attracts their attention. Not realizing the insufficiency of any one principle such as "free competition" or "protection of infant industries," they will act upon one principle until common sense comes to the rescue and advises moderation.

An account of the aims which actuate our present social activities in the reapportionment of wealth would therefore show a more or less blurred compromise between a great number of different aims. On the one hand there is a general disposition to respect the crafty and successful captain of industry who finds his way to the top; there is a disposition to allow him the fruits of his success, and not to waste much pity on the unfortunate losers in his business deals. The public conscience with regard to pov-

erty finds an easy anodyne in saying that poverty is, in our free country, usually the result of laziness or stupidity. It requires the constant exhortation of humanitarian agencies to awaken interest in alleviating the most flagrant abuses. But, on the other hand, there is a lurking sentimentalism in the public mind that makes it shudder at cruelty and suffering beyond a certain point. So the same man who applauds the unscrupulous railroad manipulator may be moved to generous sympathy for the evicted tenant in winter or for the pathetically emaciated child laborer, and may turn that indignant rage on the heartless landlord. The citizen's belief in the sanctity of private property may be as firm as a rock when he talks with his fellow club members, but if he is caught at the right moment it may be possible to enlist his support for a law that could curb the powers of mortgage holders to foreclose, or for a law restricting child labor. Admiring the financial magnate, he will at the same time fear lest any one man in power gain too much control over public affairs. He will feel vaguely disquieted about the gigantic influence which a single chain of yellow newspapers, backed by enormous wealth, may exert upon the popular mind. He will agree that moneyed interests should, in some way, be prevented from bribing, electing, and otherwise controlling government officials. While agreeing that the hope of gain is a necessary incentive, he may fear that allowing one man unlimited gain will discourage others. For it is all too obvious that a financial advantage once gained tends to be cumulative, to keep on growing of its own inertia beyond all proportion to the original service. Thus, the self-made man, although a subscriber in theory to the idea of the sanctity of private property, may look with some indignation at the man who inherited wealth without doing anything for it. The business man who believes in the inspiration of free competition may feel it vaguely unfair that one man should be allowed not only to grow vastly rich himself but to keep on preventing others from similar achievement. If he were a little more thoughtful than the average he might inquire whether this policy of industrial incentives were not self-defeating in that it discourages a hundred individuals for the sake of allowing unlimited wealth and power to one.

The Roman slogans, "Woe to the vanquished," and "To the

victor belong the spoils," appeal, up to a certain point, to popular sentiment. But if the victor proceeds to strike the weaker man when he is down, popular sportsmanship rises to protest. For this reason, it is not difficult to persuade most people, in theory at least, that every one should have at least a minimum of subsistence. Few people would be cold-hearted enough to acquiesce in actual starvation immediately around them. Governments, especially local governments, now engage universally and without protest in charitable enterprises for the very poor, the only fear in the public mind being that excessive bounty will encourage



The carbohydrate laboratory of the Department of Agriculture, one of the many laboratories maintained by various departments of the Federal Government. (Courtesy U.S. Dept. of Agr.)

those who are helped to remain poor. For these charities the more prosperous public is taxed; in other words, wealth is redistributed.

There is general tolerance also for the practice of allowing economic rewards to many individuals other than the very poor, who do not, and perhaps cannot, win these rewards in severe business competition. While investigating and perhaps resenting the easy life of these more or less sheltered individuals, people have come to tolerate their support at more or less public expense. Scientific researchers, physicians, humanitarian workers of all sorts, are rewarded at the public expense and not by winning their share in direct competition with business men. Clergymen, artists, writers, and musicians, though not usually sup-

ported directly by the government, are often supported by endowments that set them on "islands of safety" somewhere apart from the harsh struggle for existence. Not realizing or perhaps agreeing that such practices are violations of the ideal of universal competition, the public seems to feel that society is wealthy enough to afford investing in certain activities of a cultural nature in addition to the production of material wealth. If, in order to support these activities, it is necessary to raise funds, no great outcry is made when the wealthy are taxed for that purpose, "due process of law" being easily revised for such purposes when the public sentiment is definitely in favor of them.

To summarize, we may say that modern public policy is still considerably imbued with respect for private property and for the processes of free competition by which wealth goes to the most successful in a keen struggle; but that there is a perceptible trend in public opinion toward some weakening in its respect for these sanctities when they seem to conflict with certain other desirable ends. Among this latter type of ends, which are of steadily growing weight in determining social policy, two are preëminent. There is first that implication of the democratic ideal which specifies granting to every individual, not equal wealth, but a more equal *opportunity* to develop his latent powers of public service and individual enjoyment. In the second place, there is undoubtedly an increasing respect for the ideal of developing the arts and sciences at public or semi-public expense, and for the devoting of more public energy to realizing the gentler graces of life at the sacrifice of some material wealth and power. If, then, it is necessary for society to embark upon redistribution of income in order to secure these ends, less violent objections are now raised than might have been raised a century ago.

## 2. *The Methods of Reapportionment*

To become convinced of the existence of this drift in public opinion one need only observe what extensive activities the governments of this and other countries are now carrying on in directing apportionment toward the ideals just mentioned. There was a time when such interference or indeed any large-scale government activity in industry would have been rigorously opposed by all-



powerful capitalistic forces, assisted by all the influential elements in society, including the established church and the conservative universities. Even now the conservative tradition makes itself felt in stubborn fights, often supported by the Supreme Court, against the confiscation of property without due process of law. But the activities of the government in this field are steadily on the increase and are already numerous and varied. In the face of the tremendous pressure in this direction, such obstacles as constitutional checks are becoming slowly modified by reinterpretation if not by definite repeal. We shall now examine some of these activities.

A policy of noninterference by governmental authority is itself a positive force in directing apportionment. It means that consciously or not society is allowing its rewards to go to those most capable of wresting them from others in competition. This may mean the shrewdest individuals or combinations of otherwise weak individuals or it may mean, as we have seen, simply the individuals who profit by fortuitous turns of the market. When governments in the early half of the nineteenth century allowed combinations to arise and do business almost unchecked, they were tacitly favoring these combinations in the struggle. When, at the same time, they restrained laborers from banding together into unions to demand a larger share in the proceeds of production they were taking a more positive step toward influencing the apportionment of wealth. At the present time, when the governments tolerate trade unions and collective bargaining they are likewise, though seemingly passive, pursuing a policy which is a proven influence upon the distribution of income. Allowing the weaker to band together in their own defense is for practical purposes little different from actively aiding these weaker competitors in the struggle. One of the best illustrations of statesmen's violation of a much talked about *principle* when it was subjected to the test of consequences, was the definite permission given to farmers in the Clayton Act to organize associations of just those kinds and for just those purposes that they were forbidding in other business fields. Instances of this sort could be multiplied.

More actively, governments are now giving positive aid to private charity and endowment and are thus assisting voluntary

efforts to achieve ethical ideals rather than unrestrained competition. In the first place, the creation of endowed foundations for this or that purpose in philanthropy, education, research, art, or religion, is definitely legalized. Such endowments are facilitated by the adoption of statutory methods for bequest and gift. After the endowment is made it is protected by legal devices from being devoted to methods other than those intended by the donors; in other words, the law countenances and assists the withdrawal of



The Rockefeller Institute, a privately endowed organization, carries on research in medicine and public health. Members of its staff have made contributions of the highest importance to the science of public health. (Courtesy Rockefeller Institute of Medical Research)

certain amounts of social wealth from competition and its devotion to noncommercial ends. In many cases, of course, this aid goes so far as the actual granting of exemption from taxation, as in the case of churches and some schools. The recent income-tax law in the United States allows exemptions for contributions made to recognized charitable

purposes. Such facts as these do not appear at first sight to be positive methods of influencing the apportionment of wealth; doubtless, they are not consciously so intended. But actually they have this effect and no line can be drawn between these activities and certain others we are about to examine, which are much more obviously connected with reapportionment.

### 3. *How Government Affects Apportionment*

In several ways, the government actually takes away wealth from the strong and fortunate who have amassed it and places this wealth at the disposal of the weaker and less fortunate individuals. Such things as public parks, schools, libraries, and museums are available for all individuals, and usually no attempt is made to restrict the individual's enjoyment of them to an amount proportional with what he has paid for their support. They are simply

created for the public use out of public funds, and naturally the rich who pay larger taxes contribute more to their support. Along with these indiscriminate public benefits may also be classed the educational scholarships which states and cities place at the disposal of students as well as the multitude of welfare activities carried on by state bureaus of various sorts for the purpose of education, philanthropy, health, and enjoyment. In a sense, too, all government activities for the collective welfare of the group,

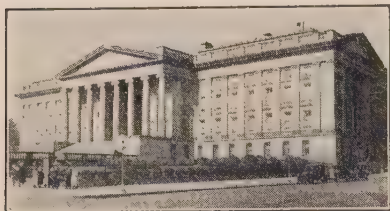


The New York Public Library, maintained partly by private endowment and partly by public funds. It has numerous branches throughout the city where any one may borrow books or do research. (Courtesy N.Y. Public Library and the artist, Mr. Louis H. Ruy)

involve a reapportionment of wealth. There may be some doubt as to whether the poor benefit as much as the rich by the protection that armies and navies afford to national property; and there may be considerable doubt as to whether all the administrative functions of congresses and legislatures are carried out without favoritism. Unquestionably, the burden of supporting these activities falls more heavily on the poor citizen, who feels a small tax more heavily than the rich man feels a large one. But, in terms of absolute amount, the rich pay more and there is no attempt to

apportion benefits in exact ratio with the amount contributed. In other words, private property rights are more or less lost sight of. Wealth is poured into a common social treasury and expended there for the benefit of such members of society as the government may decide to benefit.

The disposition to even things up at the present time is quite as strikingly manifested in the graduated income tax. Since the war, the United States and England have come to take for



The United States Treasury Building, Washington, D.C., headquarters of American public finance. (Photo Ewing Galloway)

granted the propriety of such a law, although not many years ago it would have been an unthinkable violation of property rights. The problem is: should a richer man or company be taxed not only more because his income is greater but also at a higher rate than others? Literally this is discriminatory legislation, favoritism, it might

seem, toward the weaker and less fortunate classes. Such a law never could have come into existence and been enforced with even the present measure of success, did it not express a growing popular belief that individual property rights must give way before the superior test which is the contrast in consequences. And they are found to be better when the rich pay high rates and the poor low ones. Human welfare is thus better served. The graduated income tax is definitely a device for the reapportionment of wealth, of taking from the rich and giving to the poor—not, of course, that the proceeds are handed out in cash among the poor, but that they are devoted to social enterprises in which the poor benefit out of all proportion to the tax they pay. The emergency of the war, when the collective interest was strongly brought home to all citizens, accomplished more in a short time toward accustoming the public mind to such violations of individual property rights than could have been accomplished in years of theoretical discussion.

In the years since the war there has been a certain reaction back to individualism and away from extremely active interference with



the apportionment of income. Even during the war, individualist sentiment and the power of capital were too strong to permit a general capital levy. There was little in the way of forced requisitioning of equipment and goods for military uses though certain governmental agencies, such as the War Industries Board and the Food Administration, exercised hitherto unprecedented interferences with private affairs. Certainly, however, these were equal in extent to the interferences with personal liberty of conscience and action under the draft law.

Forced confiscation of private property by the government for social use is undoubtedly feared as a general policy on practical grounds; the public is none too well convinced that the funds so obtained would be used intelligently and honestly or levied upon the sources best able to bear them. A heavy tax placed upon some function in the industrial system which is apparently well able to stand it, may easily result in weakening a necessary factor in production and may thus bring a net loss to society instead of a gain. The exact ways in which such burdens can best be imposed and genuinely beneficial redistribution of wealth effected, are still problematic, but the general principle that such activities are on the whole proper and wise when carried out scientifically, seems established beyond much dispute.

Theoretically, the policy of taking from the rich and giving to the poor could be extended to absolute confiscation of all incomes, to be followed by a redistribution, either equally or in any other way desired. An income tax could easily be made to read that incomes above a certain sum should be taxed 100%; in fact, this proposal is now frequently made. One-hundred-per-cent taxation might conceivably be applied to all incomes as earned. But to go this far would obviously mean interfering with the industrial processes to a revolutionary extent. It would necessitate not only the use of great force to compel the payment of such taxes; it would involve a stupendous problem in redistributing the vast sums of money so collected for the social welfare; and up to the present time, experience of the public with government expenditure has not seemed to be a warrant for believing that government could safely be intrusted with such vast sums for expenditure. A more fundamental difficulty than this with so extreme a policy of confiscation and redistribution is that it would most certainly disorganize

industrial production. It would be too much to expect that production would run on wholly unaffected by so complete a transformation of the incentives that are now depended upon to secure productive effort. It would be impossible, in other words, for a government to embark on so large a scale on a policy of reapportioning income without exercising a more or less proportional control over production, substituting new incentives and new mechanisms of direction and correlation for those now in use. Certain reformers have long advocated such a scheme; but since it has never been tried there is no certain way of knowing whether or not it would be found to be workable in fact—and workability is, of course, the only test. All we can say is that no definite limit can be set in general to the extent to which government activity in apportionment can be successful; such limits must be found by experimentation.

#### 4. *Reapportionment by Strengthening Weak Bargainers*

Along a rather different line, the government can play a part in evening up the incomes of its citizens. We have just been con-



The Interstate Commerce Commission in session, 1924. A government regulatory body, charged with controlling rates and service of common carriers such as railways, steamship lines, and interurban trolleys. (Wide World Photo)

sidering certain methods by which the government takes away wealth from the strong and fortunate after they have received it. But a somewhat similar effect may be secured by strengthening the weaker members themselves, and thus helping them to demand a greater share on their own account. We have mentioned this type of activity already, in regard to the governments' passive

toleration of collective bargaining, and there are many other instances of this way of reapportionment. The Sherman and Clayton acts, for example, were responses to the general feeling that in some way free competition was defeating its own ends. In allowing combinations to grow without limit in size, wealth, and power, and to use whatever means they desired, short of criminal violence or fraud, to gain business, society was really allowing free competition, what there was of it, to be destroyed before its very eyes. Individuals and smaller firms could not compete with these enormous and unscrupulous powers. Businesses such as these held their preëminence not only, and not perhaps chiefly, by superior efficiency, but by the sheer force of their gigantic size and by their unscrupulousness in competitive dealing. The existence of such firms, throttling competition, was a discouragement to the incentive of most business men. Convinced of the social undesirability of such a turn of events, the government decided to prevent, by the acts just mentioned, the forming of excessively large and powerful combinations, and the use of certain trade practices which seemed unfavorable to industry as a whole. The effect of the ensuing restraining acts was indirectly a reapportionment of income, although of course, it was not so intended. By decreasing the strength of the stronger, it made the weaker more able to compete with them, and thus to gain a substantial share in the national income.

Such activities as the fixing of prices, rates, and profits have a similar effect in diverting the flow of income from channels which it would otherwise follow, and of directing it either toward the weaker competitors or toward the common treasury.

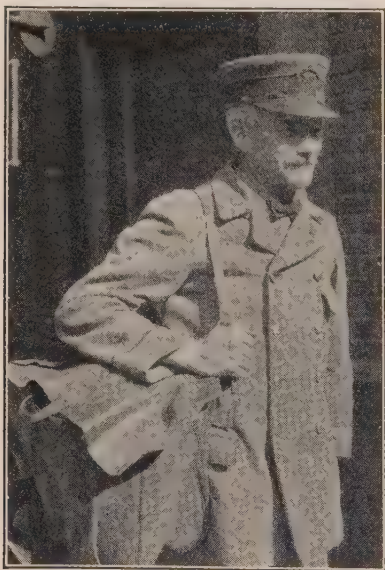
In a similar way the minimum wage laws operate to strengthen the weaker individuals and to prevent the strong and unscrupulous from pushing them too hard against the wall. Like all other steps in this direction, minimum wage laws have been, for several decades, bitterly assailed, not only by the capitalists directly affected by them, but by theorists convinced of the desirability of unlimited competition.

### 5. *The Productive Mechanism and Reapportionment*

As has been contended, a government cannot go very far in regulating the distribution of income without affecting the pro-

ductive mechanism. And at present no western government is willing to undertake the control of production on a comprehensive scale. But once more, without attempting a comprehensive policy of this sort, it is quite possible to carry on many particular activities of a productive sort. It is possible, in other words, for the government, without becoming thoroughly socialistic, to exert influence in several areas upon industrial production, the result being that income is distributed in ways other than it would have been if it were not interfered with.

In the first place, government can and does subsidize certain productive activities which it believes deserve to be favored, though the subsidizing may not be called that. By passing a protective tariff, it may assist certain industries; in other words, add strength to competitors who would otherwise be weaker.



A sharer in government income.  
(Photo Hine)

By regulating banking it may favor — as it has favored — bankers. State and city governments also by granting franchises to certain companies for public utility operations, or by granting exclusive leases of public lands or resources to private firms for exploitation, are taking a hand in production as surely as though they were embarked upon a conscious program of government operation.

Verging still more upon socialism, the government may and does embark upon some productive enterprises itself. At present, there is little done in this country in the way of extracting raw materials or

manufacturing them. But in carrying on the postal system, including the parcel post, the government is conducting a productive activity which could conceivably be done by private agencies. With these activities as production, we are not con-



cerned, but it is well to notice their distributive aspect at this point. When a product or service is marketed and compensation received, there is income to be divided up. The government, receiving compensation for its postal activities has an income to be divided among the employees who carry on these services. The fact that the income of such government activities is often thrown into the common national treasury, from which salaries are also paid, rather than being divided up directly for salaries, should not obscure the point that the government is really engaged in a productive activity, analogous to that of a private express company. How then is this income distributed? By what we choose to call the Civil Service system; in other words, on a scale proportionate to the estimated value of the service each individual renders, as judged by those in authority. Obviously, the extension toward the socialistic ideal of government control over production necessitates the reorganization of the system of income-apportionment in something like the Civil Service manner. A government completely in control of the activities by which wealth is produced and earned would have at its disposal the apportionment of that wealth. Eliminating the give and take of private competition, it would determine from a centralized position what individuals and groups were to be strong and what weak, what ones favored with large incomes and what ones restricted.

#### 6. *The Middle Ground in Reapportionment*

The immensity of the task of controlling production from a central government bureau, we consider elsewhere in this book. Here it is appropriate to notice that the distributive aspect of socialism presents a problem likewise enormous. It would necessitate an untold number of specific judgments regarding the relative value of the contribution made by each individual and group to the social wealth and welfare; that is, providing rewards were to be on a basis of compensation for service done. That alone would be a task practically impossible of scientific accomplishment; judgments would of necessity be rough estimates. We have already seen, in several connections, the difficulty of determining the relative importance of the contributions of the various factors in production: whether, for example, the farmer is more important than the railroad man, the scientist or the banker; whether the

country banker or the city banker is more important; whether this or that banker in the same city is of greater public service. At present, compensations are undoubtedly made without much relation to service rendered. But there is perhaps in a fair number of cases some approximate proportion, and in any case the necessary distribution of income at least gets accomplished, justly or unjustly. Where definite, conscious valuations and decisions have to be made, a swarm of problems arise for which society is still without reliable answers.

In addition to the problem of deciding what share each member has earned, government supervision of apportionment raises the problem of what activities should be supported and encouraged. It may sometimes be advisable to support certain individuals who have accomplished little, in the hope that they will eventually contribute. It is for this reason that governments pamper infant industries, and that scientific laboratories are endowed without being required to produce immediate returns. At present no nation is carrying on a genuinely systematic program for the development of its cultural standards, including intellectual activities. Such things are allowed to take care of themselves, and are entrusted now to sporadic legislation, now to individual philanthropy or to voluntary public support. A government policy of stimulating certain activities by directing a share of national income toward them would necessitate decisions upon what activities were most worth while for the life and progress of the nation, spiritually as well as materially. At present one is forced to recognize that no government has shown itself capable of making such decisions intelligently.

Between the two extremes of absolute neglect and complete control by government, there exists an enormous middle ground with regard to income apportionment in which free competition can be combined with centralized control in infinite degrees and methods. Without attempting complete control either of production or apportionment, the government may and does increasingly interfere at crucial points and moments to correct the most flagrant abuses (as with the minimum wage) and to stimulate certain specially desired developments (such as scientific inventions and public education). A régime which is basically capitalistic may advantageously forget at times the old dogma of the inviolability

of private property, as well as its vain hope of completely free competition. Confronting each particular issue on its own merits, a government may decide when it is more advantageous to let blind struggles take their course and when it is possible to attempt a rational decision and conscious direction of economic processes toward moral ideals.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Suggest some of the more pertinent reasons why you think there should be reapportionment of income; also the basis on which it should be carried out.
2. How does the government influence this reapportionment? What is the economic basis for the part the government plays in this reapportionment?
3. To what extent is the nation justified in passing legislation to aid weak bargainers?
4. What is meant by the "middle ground of reapportionment"?





*PART III*

RAISING THE LEVELS OF LIVING BY THE RATIONAL USE OF INCOME



## CHAPTER 25

### THE NEED OF RATIONALITY IN THE USE OF INCOME

The biblical aphorism might be used for our purpose here: "What shall it profit a man if he shall gain the whole world, and lose his own soul?" What, indeed, is the wisdom in attaining command over purchasing power if it be used foolishly? We need not look far for examples of the foolish use of income; unfortunately they are all too numerous. There are the vulgar extravagances of the rich, of course, but there are also the departures of all of us from the common-sense rules we profess to live by, not so conspicuous as the wasting of the leisure classes, but no less important on the whole. For it is often the way income is used that makes the difference for a family between poverty and comfort. And also, if we stop to consider, we can understand that every unwise use not only affects the individual and his family group, but has its reactions on all the rest of us who live in the community. This is because the community needs wise and healthy members; but also because spending directs the efforts of producers, and determines, for example, whether much or little effort shall go to making "illth," as Ruskin calls it, or whether it shall go to making wealth. So it happens often that with a rise of money income the general welfare is not improved, because those through whose hands it passes choose to lose their souls in the many toils of temptation there are in the modern world. It is only by becoming wise choosers, wise spenders, and wise users that the vast potentialities that lie in the increased productiveness of our economic machinery can be transformed into the realities of human progress.

It would have been too much to expect, we can see now, that people's choices in the modern world should always have been taken wisely, for, as a matter of fact, the problem of choosing is a very recent one in the history of the world—that is to say, a recent one for the mass of people; and not even yet have we had time

enough to build up a code of customary wisdom concerning it. In medieval times even, to go no further back, the alternatives of choice were extremely limited. If we should take the common things of life and investigate their varieties we should be astonished, from our modern point of view, at the comparative rigidity with which the medieval workman was held to certain kinds of food, of drink, of clothing, of furnishings for his house, of medicines for the cure of sickness, of toys for his children, of amusements for his scant leisure, of ways of taking a journey.

The productiveness of the economic system of the time was so limited that there were but few things in the world to choose from, and then, too, money had not become the universal medium of exchange that it now has. Workmen were paid "in kind" and depended on barter to obtain other things than those they so received. But when the habit arose of paying workmen in money, they became free to use this money to choose what goods they wished. And the custom of money payment was a part of that revolution in industry which so increased the amounts of goods in the world and the varieties of them that the freedom of choice became much richer just because of the goods there were to choose among. But people were not made any wiser—unfortunately—to meet the growing need for wisdom. Once it was hard to be foolish in choosing; now it is easy. And for the prohibitory limits that surrounded the medieval workmen we have only such moral limits as we are now beginning to build up for the restraint of waste and display and for the encouragement of simple tastes and rational living.

It is for this reason that such very great contrasts may be found in the ways of life among families who have the same incomes. One family will run to overindulgence in amusement, to conspicuous adornment and to a general shiftlessness about the home that shows itself in poor housekeeping, untidy premises and, very likely, an unwise diet and conspicuous rather than useful clothing; and another will dress plainly, eat with a view to health rather than momentary gustatory pleasure, and will keep its premises neat and its house spotless. And it may well be that the better family of the two—and can there be any doubt which of the two *is* the better family for the community?—has even less money income than the worse one. They use it wisely, that is all. The



spendthrifts of society are often engaging persons with social charm, perhaps, and are altogether likable, but they charge a heavy price for their fine manners, a price that sober citizens are reluctant to pay; and besides there never has been demonstrated to be any causal relationship between charm and ne'er-do-wellness; the ne'er-do-wells trade more upon it, it is true, and so are more notorious, but their wasting of the world's precious goods, with their decorative qualities as excuse, would not be tolerated in a really advanced society. There are ways of life, less attractive superficially, and which make more demands upon the sterner depths of character, but which contain rewards of a richness unguessed at by the wasters of the world. Virtue is not its own only reward; the rewards are various and lasting for the seekers after modern goodness. And not least of them is the sense of doing the right thing by one's fellows.

This is all very well as a general guide to conduct in the uses of income. It is when the specific judgments have to be made that difficulties arise. And they are real difficulties. For there are not—and there cannot be—any scientifically arrived-at rules for the choosing and using of goods. What is the most wasteful extravagance in one family may be the most careful wisdom in another. Consider, for instance, family A: they are all musical, with children of promise in the profession of the art. A piano for this family would be said to be plainly a sensible purchase. But consider family B: in this family two daughters think themselves musical—how usual is this case!—but in reality they are only “thumpers” and there is not the slightest chance that they will become finished artists. However, they “like to play.” Question: is a piano extravagant for family B and not for family A?

It will be seen that a thousand illustrations might be used concerning choices of food, of clothing—of whatever; in which no rule can be laid down and in which no judgment can be trusted but that of the individual or the family concerned. It is right, therefore, that society should, on the whole, demand wisdom of individuals, but not enforce certain definitions of it. A general prohibition against the eating of lobsters, the using of perfumes, the reading of novels, the playing of violins, the wearing of silk hosiery, the sleeping on hair mattresses, or living in overheated houses might be good in some cases but might very well in many

other cases work considerable hardships. The enforcers of the prohibition would certainly make themselves ridiculous, but no other result could be guaranteed. On the whole such prohibitions would seem to most of us childish. We think a person ought to know which uses are wasteful and which are wise and are willing to allow a considerable latitude for "idiosyncrasy," another word for a well-known biological distinction, "individual difference." This admittedly leaves much choosing to the realm of morals, but that is where it belongs; and neither economists nor any others are entitled to make rules in this realm.

There are, however, certain common-sense canons of choice which can be made clear so that wide divisions of judgment may be seen to be right on one side and wrong on the other and we shall try to make these distinct as we go along. First, though, we ought to expend some effort in the attempt to analyze the choosing, spending, and using activities of individuals and groups, for the purpose—if nothing more—of getting a firmer grip on what may be expected of people in the way of rational choice and what mechanisms there are for pointing them out and persuading toward them. In the process of doing this it ought to become clear that *to make choice more rational is to make it as good as we can* and that society owes its perplexed individuals some guidance in the way of a reconstructed ethics of choice which will lead toward higher rationality. Our canons of choice will be found in specific discussions of the ways in which choices may be improved—and so the levels of living raised.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Explain what is meant by rationality.
2. Point out some of the reasons for our need of greater rationality in the use of income.
3. Ought consumption habits to vary with changes in production?

## CHAPTER 26

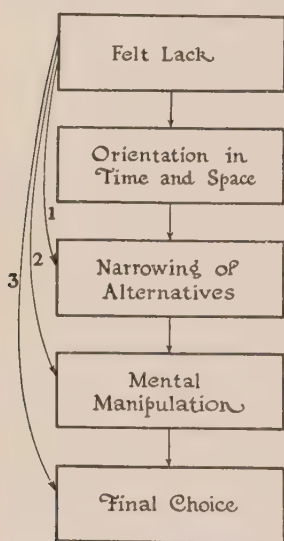
### INDIVIDUAL CHOICES: HOW THEY ARE MADE

#### 1. *How They Are Made*

When an individual chooses something, he does it because there is a felt lack, because there is something missing in the individual economy. This felt lack, however, has very complex origins. There are an external and an internal environment to be considered; and from either or both of these the stimulus that impels to *some kind* of choice may come. The body feels hunger, pain, repression, joy, or some other emotion that is primarily a function of the bodily system induced by the internal workings of the various mechanisms with which man is fitted out. Changes in these mechanisms go on continually and the mechanisms themselves vary greatly among different persons. Changes here furnish the internal environment. This body, however, is situated in an external environment which also varies greatly at different times and places and brings the physical mechanism of the body into contact with a correspondingly great variety of external stimuli. It is one of the wonderful and, as yet, very mysterious, arrangements of life that human nature is able to make some kind of adjustment between these two environments. It is the felt lacks of which we just spoke, that give notice to the mind of any disturbance of adjustment. Human nature refuses to be satisfied with anything less than perfection here and so is continually impelled to supply the bodily economy with the goods which possess the power to satisfy. Choice is made among the alternatives that happen to present themselves at the time and at the place they are required.

It will be seen, then, that choice, which is so very important to economists, has its roots, on the one hand, in the depths of human nature, and, on the other hand, in the complexities of the world in which that human nature is set and upon the conditions of which it must act.

This human nature is not simply a bundle of easily analyzed instincts or drives to action. The fundamental elements are overlaid in every individual with a very intricate set of habit patterns, or more or less settled ways of reacting to the dilemmas of existence—instinctive, it is true, but so modified often as to be nearly unrecognizable. Choices become, for the individual, somewhat stereotyped; fortunately so, for none of us could find the time or the energy to think through every act of choice we are forced to make. Habit is a short cut which enables us to escape reflection and decision. It carries its own dangers, of course, because habitual choices often fail to achieve perfect adjustment. This



The steps in choosing: a highly generalized graphic representation of a mental process.

is because minute and unnoticed changes in the external or the internal environment may have occurred since the completion of the act of choice which created the pattern. But habit is, nevertheless, in spite of this defect, on the whole a fortunate fact. And then, too, its patterns are always susceptible, with some effort, of being broken up and reformed.

But human nature with its fundamental tendencies and its network of habitual reactions is the inescapable basis for the study of choice, sensitive as that nature is to accept, reject, or re-form the suggestions presented by the external or internal environments and to bring about some kind of adjustment between them.

The first step in the individual's act of choice, then, is the feeling of a lack.

It may be a lack of food which comes purely from internal environment. We call this hunger. But—and here we may find an interesting illustration of the relation between the internal and external environments—it may become a well defined hunger for a certain kind of food, the definiteness of the want being fixed by the suggestion of an advertisement, say, which is part of the external environment. It may be a lack of



what is considered proper apparel; and here too there is an interesting mixture of internal and external stimuli, the feeling of cold or exposure or the anticipation of it being combined with the complex impulse to personal adornment modified by the social codes that govern it. Or it may be the lack of health evidenced by pain, the lack of that variety of occupation to which the race became accustomed through long eras of primitive struggle, the lack of a home-place, the lack of amusement, the lack of anything, in fact, which makes life seem whole and complete. And the extensibility of these lacks is a feature of them. There is literally no limit to their number, no end to the effort it would take to fill them all—which suggests one sufficient reason at least why mankind is never likely to be able to stop working even if it should ever desire to do so.

The step which immediately follows the felt lack is the casting about which the individual does for the general means of relieving the feeling of



Eating is a human necessity, choosing food a relatively simple choice-problem; how complicated even the simplest choices have become is suggested by this familiar American scene. Even Epicurus would have been tempted to un wisdom here. (Courtesy Childs Restaurant)

lack. And here reflection enters the process, defining for the individual the elements of his problem and its orientation in time and space and among the social institutions which must form the background of the solution. This is a necessary step because of the indefinite nature of lacks in the first place and because, in the second place, of the various general ways in which they

may be supplied. Consider, for instance, the very elementary and simple lack that we call hunger. Even this impulse, if it is to find satisfaction, must be rather carefully directed. Do we want a full meal or a light one: will a sandwich and a glass of milk do? Is it morning hunger, or night hunger with its different bodily demands? In what general place—if there are alternatives—shall we seek it? Shall we spend much or little on it? All these and many more are elements of the deliberation. They reveal the possibilities of satisfaction and they settle some of the larger problems involved; for instance, the fixed conditions are recognized. We cannot spend more than a dollar; it is luncheon and the meal must be a light one; we must not load the meal with proteins, because we are doing sedentary work—and so on. These are eliminated and as they are settled one by one, choice narrows more and more.

It may be, though, that this whole process is escaped—and for economy of effort the mind will escape it unless forced by some disturbance (some secondary feeling of lack) to recognize the need of conscious study. For it may be that it has all been done on some previous occasion. The customary lunch time comes, we go to some regularly frequented place and eat a meal like, in all respects, those we eat every day. Habit has made a short cut to choice. We may be thinking of other things—conversing even—all the time. Or, again it may be, the place hasn't to be determined but the food to be eaten has; or the food—say a bowl of milk and bread—is a regular feature but the place must be chosen.

Choice, it will be seen, is extremely complex when hunger besets the modern individual. He has efforts of reflection to make that were necessary to very few of his ancestors, who had only black bread and greasy soup available in any case, and who need not therefore bother their heads about choosing. And if this is true of so simple a need as hunger, how much more true it is of the more highly complicated needs of amusement, of creative work, of adornment, and the like! But we see that this second step in choice has two definite elements, the reflection which defines and suggests and the habit which moves over a regular pattern straight to customary choices. If this second element were universal there would be no need to analyze further steps

in choice; habit would cut them out. But we have seen that the conditions set for choice change, and that new external and internal factors creep in and make new acts of reflection necessary. It is worth noting, however, just here, that what is now habitual and performed without conscious effort, was one reflected upon. Habits are the results of old reflections and all choices are therefore the result of conscious arrangement, performed either in the present or at some past time. Most acts of choice are conglomerates; partly made up of new reflections, partly infused with old ones. This necessarily makes the analysis complicated; but perhaps if we concentrate upon the reflective part of the total act of choice, remembering only incidentally the part which habit plays, we shall come eventually to a better understanding of the whole process.

The next step, then, is toward a narrowing of alternatives with some casting about for specific goods to meet the general conditions determined upon. The meal must be light; well, there are many menus that fall within both the area of possibility and the area of awareness of the individual. Here specific external suggestions such as advertisements or the advice of friends play a large part, making concrete proposals to the mind. These are sorted over, some are easily eliminated as not meeting the condition, some survive for the next step in choice.

There is no need to repeat, in any detail, that habit may enter here again, and may short-cut the choosing process. Some specific good may appear upon the horizon of awareness and may find so complete a habitual recognition that reflection simply need be carried no further. For instance, vegetable salad appears upon the menu. It has been eaten on similar occasions with great satisfaction and with no distressing results. It complies with all the general tests; it makes a light meal, it contains vitamins, a large proportion of non-protein food and much roughage. All this is perfectly clear and familiar. The shutter is clicked; the picture taken. There is no need to go further.

But where this does not happen there is a fourth step: mental manipulation, an imaginary trying-out process that forecasts the possible actual results of the good under prominent consideration with, very likely, a comparison of it with other eligible goods. The details of this process are too familiar to need description. They





retreat would involve the weighing of the positive attributes of the new good and its possible defects as an ultimate satisfier. But this is going back only one stage, not three or four, and by no means involves a repetition of the whole choice-process. At any rate the final act of choice is the rejection of all alternatives and the issuance of permission to the general instinctive drive to come through and to act, though it must act upon the good chosen! The instinct to satisfy the craving of hunger is directed upon the vegetable salad which has satisfied the reason rather than upon the pork sausage which has failed to satisfy it.

## 2. *Their Rationality or Irrationality*

The act of choosing has behind it the necessitous urge of instinctive need, a blind urge that calls for action but fails to specify the exact action required. This specification is performed by the reason with, as we have said, a preview of the consequences to be expected and a weighing of alternatives. This preview of consequences, or imaginative survey of a future in which the projected choice has been completed and has become a part of the individual economy, varies according to the powers and the experiences of the mind that makes it. Obviously it may be accomplished with varying success. But, also obviously, the degree of success with which it is accomplished depends upon the degree of rationality with which it may have been done.

What would be the situation of a person whose choices, once made, became thereupon fixed habits, not subject to rational revision from that time? There would perhaps come a time in a world which changes as rapidly as the modern world does, when his choosing would have to cease because all the specific things for which he had formed habits had disappeared from general use. The old gentleman who was seen recently in a haberdashery store trying to buy an old-fashioned stock for which he had contracted a fondness in his youth illustrates this. Reason had lost its power



The "old-fashioned stock for which he had contracted a fondness in his youth."

to revise this habit and one pictures the old gentleman wandering from shop to shop in a vain quest for a vanished good. But we are all like that—more or less.

When a choice has been made, and successfully made—that is to say, after events fully substantiate the satisfaction that was anticipated in the act of choosing—then the habit fixes itself. A habit pattern is formed which tends to make unnecessary thereafter the raising of that particular choice to the conscious level. The instinct has been successfully objectified, it has found an object on which it can act with a maximum of satisfaction and a minimum of regrettable consequence. Thereafter its outlet is along a path established by this first favorable choice. The old gentleman of our illustration had such an experience. He chose a stock once, with all the care and hesitation characteristic of youth in the matter of adornment. It filled the want so precisely and gave such great and continuing satisfaction that it never again was forced into the area of conscious revision. Such a habit may, with the passage of time, and especially if the emotions surrounding the satisfaction involved were very intense, become fixed to the point of obsession and pass quite out of the control of reason.

The tendency, indeed, of all habits is in this direction. And it is easy to understand why: simply for the sake of economy. Once the mind has performed the function of choice it is a tremendous economy to be able to escape making that particular effort again. The reason is thus freed for other work. Carried to an extreme, we see this illustrated in the person who has completely routinized the small decisions of life. He does the same things, uses the same goods, day after day after a completely customary pattern. But such persons are often the ones who use their reasoning powers for the very highest purposes.<sup>1</sup> A scientist, a philosopher, an artist, a great administrator, simply cannot afford to have to decide each day what he shall eat and wear, and what he shall do for exercise or amusement.

This is the favorable aspect of this arrangement for economy. The less favorable one has been hinted at already. It is not a very serious social matter that an old gentleman should go about hunting for a vanished stock; but it might well be a very serious matter if

<sup>1</sup> Cf. "Notes on the Life and Work of Simon Nelson Patten," by Rexford Guy Tugwell, *Journal of Political Economy*, xxxi, 153-208 (April, 1923).

many people's habits should become unchangeable. Suppose, for instance, that the habit of eating large quantities of meat and drinking much liquor, which belonged to an age of heavy manual labor and outdoor living, persisted in the present. We should all die of it eventually. Or suppose the fixed habits of an older generation in the matter of clothing had not been revised and we had never adopted athletic underwear, or sweaters, or soft collars, or felt hats—to mention a few changes of recent years in men's apparel.



But changes do occur and occur frequently. And the reason for the adoption of a new mode like the "bobbed" hair of the modern woman,

"Suppose that the fixed habits of an older generation in the matter of clothing had not been revised."

for instance, is that we do possess the power to break up and revise old habit patterns. It is the more easily accomplished, of course, where some emotional attribute can be adduced to reinforce the dictates of reason. The emotional attributes may even be so strong as to cause revision in the reverse direction as when women choose to wear silk stockings for walking on a bitter January day. The whole matter is very complex; but on the whole there must appear to the chooser to be a smoother adjustment to be gained by making the choice that is actually made than lies with any of the rival alternatives that are rejected.

Some habits are easily revised; some are revised only with the greatest difficulty. Americans substitute corn for wheat in their diets with extreme reluctance. But they adopted athletic underwear almost overnight. Individuals differ, too. And they differ concerning the ease with which they change different habits. But the progress of society depends in great part upon the willingness of individuals and groups to give up antiquated habits and customs and to adopt new ones. This willingness in turn depends upon individual and group readiness to admit old habits to re-

visioning. In a rapidly changing material environment such as ours is, this is much more important than it might be in a world that changed but slowly. We invent ceaselessly and, having invented, we possess the power to manufacture in great quantities and so to make the invention of consequence in every life. But we cannot unless people give up the old and adopt the new.

There are two points of importance here, then: (1) it is right and economical that the smaller choices of life should become habitual, and (2) it is necessary that there should sometimes be revision of all choice habits. These two appear at first irreconcilable; but society strikes a balance and may improve upon its method. It permits certain individuals to concentrate upon each small matter, they making suggestions to the rest of us for change in that regard. So we achieve safety razors, typewriters, soda crackers, cigarettes, and automobiles. These things are forced upon our attention, and most of us, however busy with other affairs, however attached to old goods, come eventually to admit them to the scrutiny of the mind. We get around finally to making a complete new choice-act in a field where before habit had dominated. When this has been done, there is a period of awkwardness with the safety razor or the typewriter; then a habit pattern forms itself and the whole matter recedes from consciousness. We go on as though we had always used the new good.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Outline the choice process. Illustrate by examples from your own experience. Is the process always the same? How do you account for possible variations?
2. Are rational choices necessarily good choices? What is your criterion of judgment?
3. Why is habit often a saver of time and effort?
4. How do you account for sudden changes which often revolutionize our consuming habits?



## CHAPTER 27

### INDIVIDUAL CHOICES: WAYS OF IMPROVING THEM

#### 1. *Individual Choices: Ways of Improving Them*

The author of *Human Traits* has described how it is possible to cultivate the learning habit and how important it is that this should be done.<sup>1</sup> Here we have an analogous situation involving cultivation of the same mental flexibility required to guard against closing the mind to new ideas. For it is just as necessary that new goods be admitted to use as it is that fresh ideas be admitted as part of the working equipment of the mind; indeed new ideas and new goods are sometimes indistinguishable, though we would perhaps better avoid the refinements of distinction we seem to be on the verge of here. The important thing is that we move from good to good when it seems necessary. And it is always necessary when a new good, compared with an old one, offers superior advantages for the individual or for society. Perhaps we can formulate a few simple tests by which we may know where a change from the use of one good to the use of another means progress—for we do not want simply change, we want the new good to assist in creating a better environment.<sup>2</sup>

Probably the most difficult and at the same time the most important of these tests is that of asking *whether the good under consideration forms a necessary complement of all the other goods in use*. This test in turn may be simplified by thinking of it in terms of the secondary tests—*variety and harmony*.<sup>3</sup>

Just as a musical symphony is made up of many elements woven together into a complete work of art, at once varied and

<sup>1</sup> Irwin Edman, *Human Traits and Their Social Significance* (Houghton Mifflin, 1920), p. 37.

<sup>2</sup> One of the prominent problems we shall have to consider a little later will be the means of calling new goods to people's attention in such ways as to persuade them to make desirable shifts.

<sup>3</sup> These terms are taken from S. N. Patten, who used them in his *Theory of Consumption* and his "Dynamic Economics" (*Essays in Economic Theory*, 1924).

harmonious, so one's use of the goods of life may be at once varied and harmonious and may be rounded into a perfected whole unlike any of its elements, yet dependent upon each of them for its perfection. Each good, to meet this test, must contribute to a rational plan, however unlike the others with which it is associated it may be.

This is a many-dimensional concept. A symphony may have underlying elements that are themselves built up from unlike basic themes, so that the whole is difficult of understanding, perhaps, at first, but yields a rich reward to the artist and to the initiated hearer, who alone comprehend the difficulties surmounted in the attainment of the masterpiece. So the life of use is built up from the basic elements, themselves not simple, of a wise unity in feeding oneself, of clothing and housing oneself and in choosing among the environment's offerings of other goods. This rational basis of life is not easy to attain, for it requires a sustained impulse toward betterment that is at once supplementary to and the guiding force of the more primitive instinctive impulses and which has enemies among the impulses themselves. If choice were guided by instinct alone we should never attain a life of use that could be compared with the intricately designed completeness of the symphonic composition. Only by calling upon the superior gifts and powers of the human mind for the highest contributions of which they are capable can we arrive at anything like it. And because of this the question immediately arises whether there actually exist in the human mind the potentialities of this designed and controlled existence. If we were creatures of instinct, tossed and pulled about by each of these primitive mechanisms in turn, there would confessedly be no basis whatever for hope. But that we have got so much as we have of design, of finish, of complex perfection, in modern life, reveals the existence of some hidden spring of reason which we have as yet learned to tap but clumsily but which we feel we may rely upon as a resource of the future.

We cannot here develop the complete basis in psychology for the rational control of existence but we may briefly indicate that the key to it is contained in the phrase "effective objectification," which means, as we have already suggested, the *successful* filling of lack; and lack we may define as an unperfected movement

in the symphony of life. As the musician goes over and over the composition he has wrought out, altering, adding, taking away, shifting emphasis, changing pace, the masterpiece grows, under his long and patient toil, toward a perfection that reveals itself anew at every stage of the work. He does not aim at some imagined goal, arrive there, and then stop. He is always seeing new goals with infinitudes of inner qualities utterly unguessed at in the beginning. And, literally, his symphony is never done. It could grow under his hands as long as his working powers persisted. This is why musicians complete so few symphonic pieces in a lifetime and why all an individual's symphonies possess distinguishable likenesses. Beethoven is not Brahms, nor is Wagner, Franck. But Brahms is always Brahms working away at his own task.

Unless comparison is utterly futile this illustration gives us a simplified picture of the masterpiece of life. Reason utilizes all the elements it comprehends; it works them over and over, choosing, suppressing, discarding, fitting, manipulating, testing, searching for new elements; altering the design as new goals appear, shaping life to a changing vision of perfection. And all that is needed for the attainment of whatever it is that we can attain in making masterpieces is the conscious regarding of the life of use as a piece of work to be done, as, in a sense, the supreme art. It is an art that requires much of the artist; but what we ask from our existence here upon earth is, fundamentally, a trial of our powers. And here is that trial. We are judged by our fellow craftsmen in life and we respond to their dispraise or their applause. But the symphony upon which we are at work is, after all, so much better known to us than to any other human being, however intimate, that we take the judgments of others at their best with a large grain of salt and our real striving is to satisfy an inner standard of our own.

Somehow, though, men are driven to escape conceiving life in this way. There is much more psychic comfort in the varieties of fatalism and mysticism. This is partly because so many of us feel the handicaps too great to make any striving worth while; and partly because of the deep sense we have of failure. We manage to escape both of these by postulating deities who control our lives minutely and who ultimately recompense us for

the handicaps of life by the rewards of eternal blessedness. In no area of life is this more true than in that of the use of goods. And it accounts, at least in part, for the carelessness with which we arrange the patterns of that life. We turn away from the difficult art; we fall into a meaningless jumble of casual atrocities that do not satisfy, but only irritate, in an already confused existence.

A part of this easily awakened sense of failure and hope of mystic rewards beyond life, again, is due to the long ages man passed through in which he was actually face to face, most of the time, with starvation. This has been called the "age of deficit" and the present, in contrast, an "age of surplus." And truly, in the face of continual deprivation, of being held down to the barest sustaining diet and shelter, man could scarcely be expected to have come to the conceiving of life as an artistic adventure in which he might triumph by fashioning his consuming activities into a superlative design. The notion would quite properly have appeared to him fantastic. And long ages of grinding poverty inculcated the very fiber of his mind with a morality of abstinence and self-flagellation. These are the typical virtues of economic deficit. But in an age of surplus they reveal their insufficiency in a thousand ways. It is not the anchorite, but the chemical engineer, the executive genius, the scientist—and the symphonic consumer—great producers and artistic consumers—who are needed for the new age. And we need such a revaluation of life's codes of conduct as will make this clear. For the old, dead concepts linger on in a world that has outgrown them.<sup>1</sup>

The impulses to conservation are overexercised to the detriment of the impulses to creation. We are apt to conceive of consumption as a kind of final act, a using up of something gained by human effort. And we are consequently apt to think also that the person who performs fewest of these final mystic rites of use which are a loss to the world, is the best person in it. Frugality is dignified out of all proportion. A more useful conception is the biological one which regards consuming activities as the recreators of energy and justified to the extent to which they succeed in recreating it. Saving or frugality which sacrifices human energy is curiously shortsighted; for it is from human energy

<sup>1</sup> Cf. also the final chapter of this book.



alone that we obtain the goods for consumption. Restriction of it limits production. Thrift, not extravagance, is the great enemy of the race, though extravagance, too, in its way, is waste.

The masterpiece of consumption is something to be labored over and brought to perfection; it furnishes its own energies for the effort; it yields its own rewards for accomplishment. It is not a series of satisfactions to be placed in pigeonholes of wants; but a series of creative challenges to the intelligence and the will.

With this notion of the potentialities and the necessary activities involved in the life of use, we are in a better position to view some of the ordinarily accepted maxims of conduct in the use of goods. We have already seen that blind adherence to an ideal of thrift may lead to degeneration rather than conservation. It is also true that blind adherence to specific choices or to such taboos as distinguish certain social cults may be very dangerous enemies of progress in the arts of consuming. We ought to be free to change; and any limitation on this freedom that originates in prejudice or dogma is a definite hindrance that would better be removed. Specific choices cannot either be demanded or prohibited successfully and they ought not to be. For a good is one which is *good for* some end. It is the end which is important, not the use or avoidance of the good. And when the goal has been made plain and the incentives to it have been furnished, all that can be done has been done. If humanity is to progress it must go forward of its own volition. It can be persuaded but it cannot be pushed.

An individual can achieve morality in consumption not by adhering to any strict régime, fixed once for all, which permits certain choices and prohibits certain others, but only by freeing himself for the use of all the instruments of a perfectly constructed life and by the anxious and prayerful creation of it after a pattern dictated by his reason.

Certain devices facilitate the accomplishment of this. One of them is the budget. Budgets are familiar enough to need no description here. They are the necessary paper-work of existence. We all of us make use of them; but most of us not enough to accomplish the full result. Used carefully, the budget can raise the limitations, the goals to be reached, and the instruments avail-

able into simultaneous view, and so can enable a highly rational scheme to be built up for the control of consuming activities. It need not have any special form; it would not contain the same items for different individuals. Its special advantage lies in its ability to make a scheme conscious and to relate each item in it inescapably to all its other items. Without a flexible budgetary device it is impossible for the individual to make a masterpiece of his consumption.

The modern individual, however, no matter how hard he may try to make his choosing complete, varied, and harmonious, is dependent to some considerable extent upon the group of which he is a part and upon society as a whole. From his group he must have some social approvals for his really good choices, no matter how independent he may be. The satisfying of one's own standard is the ultimate test but we are all weak on the gregarious side. We want those for whom we have love or respect to approve our choices. From society as a whole one gets, among other things, the suggestions he must have of the goods that are available. This last is a particularly serious problem in our civilization. We have numerous goods from which to choose, it is true, but no disinterested or trustworthy means of having them called to the attention. Almost the only means, indeed, aside from word-of-mouth suggestion is commercial advertising. And commercial advertisers are interested rather to dispose of quantities of goods than to assist the individual in the perfection of his own life.

These social dependencies of the individual are very apt to be hindrances rather than helps, for if advertisers tempt the unwary indiscriminately, we are often led by our best impulses directly to unwisdom. For the modern family—or other social group—is only too apt to place a false emphasis upon quantities of possessions, upon the display of riches and not to understand the hardly achieved design of a life of considered choice.<sup>1</sup> But if these are difficulties, the individual must surmount them. And also he must do his part in the reconstruction of incentives in a society that leads men wrong.

<sup>1</sup> For further discussion of this point see "The Distortion of Economic Incentive," by R. G. Tugwell, *International Journal of Ethics*, xxxiv, 272-82 (April, 1924).

## 2. *Ways of Improving Individual Expenditures and Uses After the Completion of Choice*

Assuming that the problem of choice has been solved, there remains the actual exchange of the liquid purchasing power possessed by the consumer for the goods he has chosen. This may be done in more or less efficient manner; and the single individual is many times at a considerable disadvantage here on account of the superior market strength of those from whom he must buy. The remedy that is readiest is the increase of market strength by the simple expedient of joining with others who also have small expenditures to make: the aggregate will represent a considerable amount. Buying can then be on a larger scale and can be done much more advantageously. The most obvious larger group is the family but, although there are certain gains in this, they are small, and the most efficient group for this purpose is the consumers' coöperative. These associations, so successful abroad, have not greatly prospered in the United States. It may be, however, that we shall turn to them more as time passes and we come to a clearer realization of their possible services to us. For they not only make the individual's spending more efficient, but they also contribute to a desirable social atmosphere of plenty without waste, of solid satisfactions rather than illusory ones—in a word to a much needed morality of consumption.

There is also to be included in any discussion of betterment in the use of income the problem of the actual using of the goods that have been chosen and bought. We have already discussed this by implication in discussing choice. We mentioned the great need we have to build up standards of use that shall be adapted to modern needs rather than those of some age already past. But it may not have been made sufficiently clear that these standards had to do with use as well as with choice; and in stressing the falseness of the "thrift" or "abstinence" attitudes toward economic goods, we may have failed to make clear that a morality of generous use and vigorous living does not mean also approval of extravagance. Nothing could be less true; for the vigorous life of creative effort reduces the emphasis upon the use of goods which is so important a feature of abstinence morals. The fact that thrift is praised and abstinence rewarded in an age when obviously the need is for great releases of energy and for the gigantic creative

effort that must reconstruct the material basis of life, turns men's attentions in the wrong direction; and by a kind of perverse will, they accompany their strenuous production with an equally strenuous consumption that saps their energy rather than restoring it and so prematurely ages them.

What we very obviously need is what we somehow lost as industrial society shaped itself; and that is a morality of production. As it is we praise men only for having things and quite neglect to approve their doing things. We cannot here go into the background of all this but the background is clearly that of the shifting of industry from home to factory and of the spreading market areas of the modern economy,<sup>1</sup> the net result being that for his productiveness man gets little praise and a pecuniary reward; but that for his ability to support his family in flashy style, thus prostituting his wife and ruining his children, he gets his only adulation from society. This cannot go on; we not only have to have a recognition of man's creative abilities that they do not now receive, and guides to choice which will lead elsewhere than to the silly degeneracies of modern wasting; but we also have to have a morality of "plain living and high thinking," living that restores rather than drains men's energies, and that makes high thinking possible and praiseworthy.

Coming to think of consumption as choice and use, and of symphonic consumption as—next to efficient production—the most socially desirable of all ways of life, may help us to arrive there. Making ends visible and removing them from the emotional to the rational field always marks a gain, because it makes life conscious and therefore less likely to be jumbled. Perhaps education in consumption may assist our civilization as it makes this tempestuous transitional passage, which we are in midst of, from medievalism in which we linger, to industrialism, toward which we are thrust.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Enumerate some of the methods of improving individual choices.
2. Is thrift always beneficial to (a) the individual, (b) the group? Explain.
3. How does the approval of the group influence the individual choice?
4. What steps follow after the choice is made? Are they subject to improvement? How?

<sup>1</sup> Cf. R. G. Tugwell, "Experimental Economics" in *The Trend of Economics* (Knopf, 1924), pp. 375 ff.



## CHAPTER 28

### GROUP CHOICES AND USES OF INCOME

#### 1. *Family Uses: How Family Choices Are Made*

When we come to any discussion of the collective uses of goods we enter an even more difficult phase of the problem; for, if our knowledge of individual motives and the best means of controlling them is limited, it is much more true that our knowledge of collective psychology is more remarkable for its gaps than for its content. We are on very uncertain ground; ground where most of what can be said must at the outset be admitted to be of the nature of speculation. The attempt to penetrate its mysteries may be valuable for all that, however, especially since any facts that may be happened on are certain to be a genuine addition to knowledge.

One of the grave difficulties is met at the very outset when we attempt an analysis of family choices. This matter would be less difficult if all family choices were made by single individuals for the group. We should then fall back on what we know of individual choices and say that in order to improve the choosing habits of families we need only improve those of its individual members. Social theorists used to view all society in this way—as a simple aggregation of persons the motives and actions of which were to be understood by gaining an understanding of the motives and actions of its individuals. But the facts denied this theory the right to a very long existence. Obviously crowds—even very small crowds—react in ways that single individuals never do. And so we know that families—which are small crowds—choose things that its single individuals would never choose and, having chosen, use them in ways different from solitary uses.

And not only is this difference between individual and group reactions an element of uncertainty. There are others. There is the fact of the changing composition of family groups; and there is also the shifting industrial basis of family life. There may be others; but these are too important to be ignored, although we

can do no more, in our present lack of certain information, than to make acknowledgment and pass on to the somewhat safer ground of individual psychology. Family groups are, and, for a very long time, have been, shrinking in size. As the social need for increased population falls off, and as children become a burden rather than a help, their numbers diminish. Lowered mortality

rates also contribute, for, as the death rate decreases, the numbers of children needed to keep up the adult population diminish. This is an important consideration because the relationships between parents and children are very different now from those of any past time and are continually changing. Changing internal relations affect the choices that will be made. We cannot be certain just how these effects are registered. The problem is too new to have been thoroughly explored; but no good purpose could be served by ignoring it. This is true too



The housewife does the larger share of the choosing for the family group. of the shifting industrial basis of family life, for the obvious usefulness of the family grouping in all primitive societies, only leads us to wonder how long the grouping will persist when the main reason for it has disappeared. In every society before our urban one, the family had a double industrial function—production and consumption. Within our own time production has so far disappeared from family life that only the merest unimportant vestiges of it still remain there. The factory, not the home, is the place where most goods are made now. But the family has an important consuming function still, though even this is quantitatively less important than it heretofore has been. It must be seen, to understand the implications of this change, that woman's function in production has been stolen from her and that she had been left to

the petty cares of a diminished institution while her husband does the job that was once her chiefest glory.<sup>1</sup>

We are exaggerating to gain emphasis, but it is very nearly true after all that housewives in cities are changed into competitors rather than partners of their husbands. They used to—still do in rural life—have a well defined place in productive life. Now their interests are reduced to spending the income he earns. That this would be a fruitful source of irritation is clear and every social student knows that this is so. But our chief interest here is to examine the spending activities of the housewife as the chief disbursing agent of the family group to see how fit she is for this most important of her remaining tasks about the home.

The first thing to be said when we begin this line of inquiry is that the job of choosing modern goods and of handling family accounts is a new thing for her, quite outside the tradition of housewifely functions. It takes her into the world of commerce where she is a stranger and throws her into bargaining opposition with the shopkeeper class, experts in the arts of temptation to buy. The fact that it is outside her traditional province, however, may or may not indicate the expectation of bad results. What *would* lead to such an expectation, however, is the obvious present neglect of training future housewives for their task. The future matron in the rural home used to have many valuable years of training in the mysteries of all the household arts and came to the management of her own home so completely prepared to meet the exigencies of its management that her carrying on was practically letter-perfect from the very first. The most casual observation of the usual training of girls and young women at present reveals the shortcomings of our own time. The old tradition has died. There is no new one. Girls either receive, in school and college, a poor imitation of their brothers' training or the attempt is made to force them to preserve the forms of the past. They are not taught to look for a new orientation for no one is certain yet what it ought to be. But anyway the modern girl is apt to buy her first roast of beef or her first sauce-pan *after* she assumes her matronly state, rather than *before*. Because she is all at loose ends

<sup>1</sup> Cf. W. C. Mitchell's illuminating account of housewifely handicaps in "The Backward Art of Spending Money," in the *American Economic Review*, ii, 269-81 (June, 1912).

hid from them the developing future. The tragic situation of women is not the least serious result of their folly.

Arriving Buyers may register in this column by telephoning LACKawanna 1000

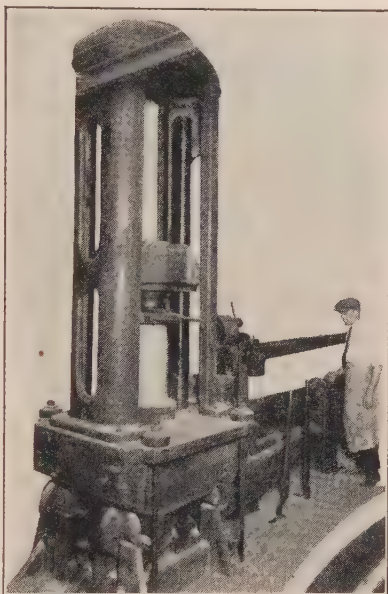
Blatt, George; A  
ay.

But aside from the whole matter of her lack of training, the housewife is under considerable disadvantage in comparison with any other consumer in the community. This is clearest, perhaps, when we compare her situation with that of the buying officer of an industrial concern. Such a person has, to begin with,

an aptitude, usually, and always a training, for his job. Then too he buys in large quantities upon well known standards and with experts to measure the deviation of the goods from the standard. The quantities in which he deals and the commercial position of his firm lend him an importance in the market and an absolute bargaining advantage that are quite unattainable by the housewife in her small buying operations. It is worth mention also that quantitative standards are to be had in business buying that the housewife cannot fall back upon. The buyer of steel for the making of a machine is guided by definite results. The housewife does not make anything so simple as machines with the goods she buys. She attempts to create family welfare. But this is difficult to measure. Hence the tendency of faulty customs to persist; they cannot easily be proved to be bad and they are harder to rout out, once they are firmly fixed.



Altogether the economic position of the modern housewife is not an enviable one. On the one hand she is denied the kind of work for which she is most obviously fitted; and on the other hand she is forced to perform tasks for which she has no aptitude and very little training. At best she can do no more than register a partial failure. In time the preponderance of the choosing, spending, and using functions will doubtless pass out of her hands; indeed there is a definite trend in that direction. Other individuals in the family assume more and more of the direction of their own consuming activities as family life disintegrates; and this extends not only to the absentee husband but also to the children whose time is largely spent away from the home-place. But what must be said at the present is that the housewife is the main disbursing agent for the family and that, aside from efforts to improve the choices of all its members, the chief hope of progress, through better family consumption, lies in the study of the housewifely function and its improvement.



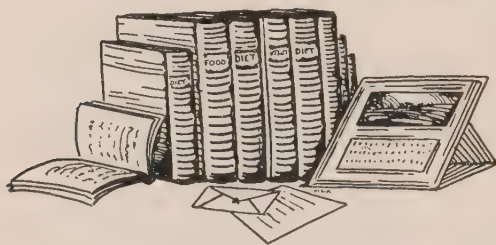
Testing concrete cylinders. Upon the results of such tests the commercial buyer can depend. The housewife is not equipped for testing; her only dependence is upon faulty individual judgment. (Courtesy Portland Cement Association.)

## 2. *Family Uses: Ways of Improving Family Choices*

One mechanism has been devised in recent years that promises to assist very materially in aiding the housewife to improve family choices: the budget. A family no less than a business firm or a nation can gain by the use of this device, which is, really, only a means to a more comprehensive planning of the life of use. It requires, however, the merging in a family fund of the incomes

of all its members and a willingness to be guided by the wisdom of the group. The great difficulties in the way of its usefulness are the very facts of the reduced integrity of family life, the tendency of children to break away from parental supervision, and the spasmodic tyrannies of parents in the effort to check the escape of youth from their domination. Where it can be assumed that family life is real, the budget is possible and helpful.

This device is the more desirable because it assists in reducing the whole plan of life to quantitative terms and in giving due weights to the various using activities that are contemplated. It helps also to insist upon the material basis of health and happiness and checks wasteful spending in favor of the acquirement of solid satisfactions. The given quantity in any budget is the expected income. To this must be fitted the expenditures that can be made.



The housewife must do some studying and paper work to perform her functions well.

First among these will come the utter necessities, food, clothing, and shelter—that is to say, a decision will have to be made concerning the amounts of income that must be set aside for these purposes. And here there can be called in the

assistance of experts. For dietitians have done much work in calculating the necessary elements of an efficient diet, reducing the whole to calories and to chemical content. These calculations of food experts, beginning to be so numerous and so widely circulated in newspapers, magazines, and books, form at least a minimum basis for the food budget. Likewise the shelter item can be reduced to the necessary cubic feet of air space per person, though this is only an irreducible minimum and does not include the definite physical and psychological needs for sun and air.

This leads to the admission that has to be made concerning quantitative measurements: that they can be depended upon only within definite limits in constructing a budget, for the physiologically necessary quantities of goods are not yet certainly enough known to be accurately measured. They do form a useful guide,

however, and do look in the direction of better planning and so a better fashioned family life. The family that has contracted the budgetary habit has a better chance as a family and greater likelihood of advancing the interests of its individual members through the supplying of a firm foundation for health and normality.

It is no part of our purpose here to enter into a technical discussion of the construction of family budgets, though the student will find it interesting and instructive to investigate this matter;<sup>1</sup> we are, necessarily, interested rather in the uses of the budget as a social instrument. One of these uses is as a basis for judgment in the revision of customary consuming habits. Families recurrently face this problem because of the various forces of change that continually play upon the group. New members are added to it; others drop out; the income is raised or lowered; the ages—and consequently the needs—of various of its members change. Also the group is washed as continuously from without by great waves of social, political, and industrial change that affect it profoundly. For all these reasons the budget needs to be a flexible instrument, not a rigid one. Obviously nothing can be said here concerning the ways and means of achieving this. Flexibility of budgeting is not a function of the budgets themselves; but of the persons and groups who use them. All that can be said is that the revision of budgets ought to be as frequent as the changes that affect them; but there are certain canons of judgment which may offer some assistance, and they might be formulated somewhat as follows:

1. The physical, mental, and moral welfare of the individuals of the family, and the family as a group, living and functioning as a harmonious unit, each member of which is the complement of the others.

2. The welfare of the wider social group. Adaptation of family consumption to "least-cost" commodities (those furnished most

<sup>1</sup> B. R. Andrews, *Economics of the Household*, especially Chapters 2 and 3; John B. Leeds, *The Household Budget*; National Industrial Conference Board, *Family Budgets of American Wage Earners*; Esther L. Little and William J. H. Collon, *Budgets of Families and Individuals of Kensington, Philadelphia*; Bureau of Applied Economics (Washington), *Standards of Living, A Compilation of Budget Studies*; W. F. Ogburn, "Measurements of Cost of Living and Wages," *Annals of the American Academy of Political and Social Science*, Jan., 1919. Cf. also various issues of the *Monthly Labor Review* of the Bureau of Labor Statistics, U. S. Dept. of Labor, and of the *Journal of Home Economics*.

bounteously and with the least resistance to man's productive efforts); to reduction of social wastes and extravagances; and to building up strong and desirable social institutions, industrial, governmental, educational, and recreational.

### 3. *Family Uses: Ways of Increasing the Efficiency of Family Expenditures and Uses*

There is one obvious means of making family expenditures more efficient: that is, of course, by coöperating with other families. It is just this possibility that gives peculiar strength to the coöperative movement. For a family is too small a group to secure those economies in buying that a business firm has. Its bargaining must always be done under a heavy handicap which is removed through consumer's coöperation, for then the buyer's strength equals that of the seller. It is characteristic of careless America that coöperatives have had no great development here. Family life is closer to a tradition of independence and self-sufficiency that will ultimately give way before a growing need for coöperation and a recognition of the inevitability of the interdependence of all social groups.<sup>1</sup> We shall come, sooner or later, to coöperation.

But there is also another way in which family expenditures are being made more efficient. A considerable—and growing—proportion of income goes into funds which insure against the various risks of modern life: ill health, accident, unemployment, old age, and death. And another part goes into the facilities of life provided by communal expenditure: education is one of these; and much recreational expense is also governmentally met—national, state, and municipal park systems, for instance—and health is rapidly becoming a matter of public concern so that free clinics and even nursing service are sometimes provided. None of these could be had through independent family expenditure at anything like the rate at which they are now provided and there are wide possibilities of further developments of this sort.

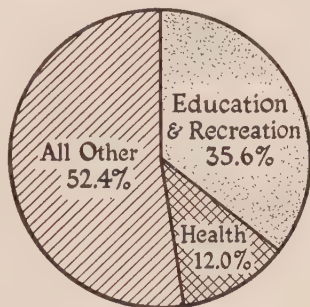
When we come to a discussion of the possible means of bettering the modern family's uses of goods after choice has been completed and expenditure made, we are obviously in a field where standards are difficult to set up and where the means to their attainment are far from clear. In our discussion so far we have made no

<sup>1</sup> For discussions of the coöperative movement see Chapter 32 below. .



pretense of solving difficulties that are, in our present state of knowledge, insoluble. And we shall not do so here. About all that can be said is that if family consumption is to be strengthened, the family itself will have to be rehabilitated and its members be given a new sense of responsibility for its unity. What this involves, we have already seen. The requirements are of the nature of recasting the old notion of family as father, mother, and numerous children, with a definite home which served as a central rallying point for long-run social life. That kind of family is becoming so scarce as to be negligible. The new family is a definitely smaller group with weakened economic bonds and with far fewer inter-responsibilities. The old compulsions to economic consumption fail when these changes approach completion and the income of the group comes to be contributed by one or two members and when the rest have an interest only in consuming. The causes of discord outweigh the bonds of concord. Some-

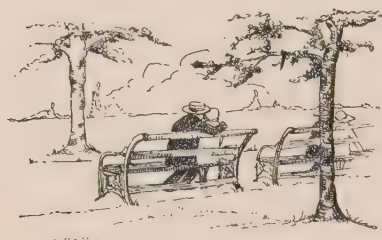
how, then, perhaps, society can arrange so that income is made a family matter, not an individual matter.<sup>1</sup> It seems to be clear that unless this is done, consuming will come to be more and more an individual matter and the family will break down completely. What would happen in that case is not far to seek. We can see it now. Other groups are forming in our present society which are taking over the old family functions. Education goes to the schools, amusements to theaters, playing fields, and dance halls, eating to the restaurant, sleeping to the club and hotel, courtship to the park, the automobile, and the streets. The home of such a city



This chart shows the relative amount of funds expended by the city of New York on education, health, and recreation for its citizens. Health includes such items as street cleaning, sewers, water supply, and public baths; education and recreation, such items as libraries, museums, parks, and playgrounds. (Statistics from the *World Almanac*, 1925)

<sup>1</sup> Cf. Paul H. Douglas, *The Family Wage*, 1925. There are certain definite objections to a family wage system not discussed here. But from the consuming point of view such a system offers considerable advantage.

as New York has already degenerated beyond recognition into temporary quarters in a barrackslike structure occupied in common with fifty or a hundred other families. But this is not a home in the old sense; and as a consuming group many of its attributes have disappeared. Whether it is worth while to do what is socially necessary to rehabilitate family life seems to be a question that we are unwilling to face. But our unwillingness



to face it is, in a way, a solution, for if we keep our backs turned a little longer, what is left of home life may have disappeared altogether. We shall then be concerned not at all with family budgets but with school, municipal, dance hall, and club budgets, for they will be the wider groups to which the individual must look for social comfort and for efficiency in the employment of goods.

There is a good reason, of course, why the world will not become entirely individualized in its uses of goods—besides, that is, our incorrigibly social

natures. This is that the varieties of modern goods lend themselves so much more efficiently to social exploitation. A machine-made talking machine, an automobile, a symphony orchestra can be enjoyed in company at less cost to each individual. Food can be better prepared and more cheaply handled in a restaurant. Paved and lighted streets are only possible to *Communities*. And so we develop a peculiar social culture at once more isolated and more socialized than was ever characteristic of any other society. On one hand we have the tiny house or apartment, or the bachelor club or hotel, where people may be more alone than any individual ever was in the houses of our ancestors; and on the other hand we have the highly socialized features of urban life, the theaters, the restaurants, and, of course, the factories and offices. One cannot certainly say whether this is the future mode of development or

whether the family will be reconstituted; but most of us will have a suspicion, though tinged with regret, that the future belongs to the cities and that life will have to be lived in hotels. If this is so it will be the task of the social student of the future to examine the consuming activities of the new groups that are forming and to formulate standards rather for them than for a family life that has disappeared.

In so far as the family persists as a consuming unit the means of bettering its uses of goods consists in building toward standards of complete and harmonious group development and of the economical exploitation of the goods-resources at its disposal.

It must be said that the forces at work upon the family have tended to break down old standards of use and have failed to substitute others for them. What "plain living" there still is finds it hard to persist in the face of the professional temptation of advertisers, guided in many cases by university psychologists. And while it may be that civilization has passed the stage of development at which plainness persists as a virtue, it has hardly yet reached the stage when it can afford to trust the using of goods to the impulses of its abnormal adults and the aberrations of its children. We need not be abstemious, but we need still to be wise.

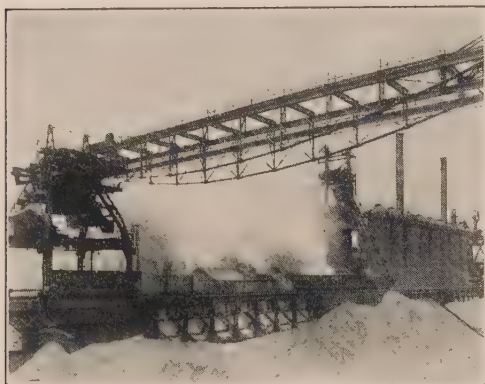
But if, as we believe, it is not any change in human nature, but indeed, the shifting of the forces that play upon it that have caused the phenomena of unwisdom to which we have adverted, and that have made "flappers" of our young women and "cake-eaters" of our young men, no amount of interior taking thought or of effort at checking modern tendencies can have any considerable effect. Unless we are willing to control the forces that underlie the changes, about all we can do is to go along with them, to accept the re-formed status of the family and to accelerate the process of forming new social groups that will exert a real influence upon their individuals in the direction of wisdom in use.

#### 4. *Industrial Uses: Business Choices, Expenditures, and Uses*

There is one way in which goods are used which has not been discussed, and which it is important that we should not neglect. This is the use of them by industry—or, to be precise, by the businesses that operate industry.

It is not difficult to understand that these uses are not final

uses in the sense that is meant when we say that an individual has consumed something. Businesses use goods to make more goods. And, on the whole, they succeed in the effort to multiply the total usefulness of the materials that pass through their hands. This might be called intermediate consumption to distinguish it from the uses to which goods are put in final consumption. Its problems are large because there are very few things that can be thought of



A modernized blast furnace; more efficient devices for producing are the contribution of industry to progress in consumption. (Photo Hine)

that do not require several—and usually many—of these intermediate consumptions to have taken place before they can come into being. The blast furnace uses up coal, limestone, and iron ore, but it makes pig iron. And the pig iron is consumed in its turn by other factories which destroy its character as pig iron but make

of it something else. In combination with other materials it may find a final use as the wheels of a freight car, as the beams of a building, as a sewer pipe, or as a pair of roller skates. Even then it may only be contributing to the finishing of a good that seemingly has had no relationship with the iron mine. It may, for instance, go into machinery for cutting or sewing clothing or for pressing paper or for making furniture.

These various and complex processes of industrial use and shaping, it is important to see, play a large part in determining the size of the ultimate product of industry. And ultimate product is the social income, the income of consumers as a whole. Businesses, like individuals, vary in wisdom. Some make foolish choices; some make wise ones. Some spend incautiously; some shrewdly. Some use the goods that come to them wastefully; some efficiently. And since the total product of these choices and



spendings and uses in finally finished goods is the income of society, the social student may legitimately interest himself in the efficiency of the whole process.

When he examines the choice process with this in mind he is at once struck with the fundamentally different nature of the phenomena here from those he met with in studying individual choice. For here choice is highly rationalized and is carefully budgeted to keep it rational. This was not so in the old-fashioned business which proceeded by rule-of-thumb according to the shrewdness of the individual concerned; and it is of course not true in the survivals of the old-fashioned businesses there are in the world today. But in the really modern business exact planning has been carried as far as is possible in the light of present knowledge and shows promise of being carried further when that knowledge is extended. ♣

It would be difficult to suggest improvements upon the planning activities of the best representatives of large-scale business. They are experimental, exact and carried out a good way ahead of the event. What criticism is to be made is not to be made of purchasing departments themselves but of the managements that direct their activities. For often management hinders the straightforward carrying out of the programs of its technicians. Profits are, as we have said in our discussion of production, sometimes to be made by withholding goods from the market rather than by pushing production programs to the limit of efficiency. And withholding, stoppage of regular schedules, throws planners off. They cannot see ahead when all ahead is uncertainty. Not all uncertainty is due to management, of course. Much of it is traceable to the large uncertainties of industrial life which are the continual risks of business.

These latter uncertainties, however, are also, in a sense, failures of planning—of the larger planning which envisages the whole business as a complement of other businesses, the whole making an industry. And even here, there may sometime be a possible extension of planning to include the relations of industries to each other in providing the whole social income. We have discussed this as the problem of coördination. But accomplishment here is still in a distant future. An instance of what is meant by the short-sightedness of business is furnished well enough by the failure

of most American businesses to foresee and prepare for the critical depression years of 1920-21. Many of them found themselves "overextended." They had bought large stocks of goods at prices far higher than those at which they could be sold. The same situation arises whenever depression recurs.<sup>1</sup> And, as we know, it does recur with cyclical periodicity. It is difficult to see how such

difficulties as these, which lead directly to social loss and inefficiency, can be avoided except by closer cooperation among businesses and by giving up completely the old notions of the competitive advantages to be gained by secrecy which were always largely imaginary.

Once this idea has permeated throughout the business world, the way is prepared for the better gathering of statistical material concerning the larger phases of industrial activity which concern more than one business. The analysis and interpretation of

MONTHLY SUPPLEMENT TO COMMERCE REPORTS	
UNITED STATES DEPARTMENT OF COMMERCE WASHINGTON	
SURVEY OF CURRENT BUSINESS	
COMPILED BY BUREAU OF THE CENSUS    BUREAU OF FOREIGN AND DOMESTIC COMMERCE    BUREAU OF STANDARDS	
No. 45	MAY 1925
CONTENTS	
<b>TEXT MATERIAL</b>	<b>PAGE</b>
Preliminary summary for April.....	1
Cases of business in March.....	1
Criteria: business.....	2
Summary of indexes of business.....	7
Review, principal branches, industry and commerce.....	10
<b>BASIC CHARTS</b>	
Business indicators.....	2
Wholesale prices compared with iron and iron waste.....	4
Employment in war-destined industries.....	6
Production, stocks, and unfilled orders.....	8
Comparison of wholesale price index numbers by groups.....	9
Volume of building contracts awarded in 27 States.....	14
Commercial failures by specified classes of establishments.....	20
<b>GENERAL TEXT TABLES</b>	
Business indicators.....	3
Wholesale price comparisons.....	5
Business summary.....	7
Indexes of business (production, prices, sales, etc.).....	22
April data.....	25
<b>TREND OF BUSINESS MOVEMENTS</b>	<b>PAGE</b>
Trends.....	29
Metals.....	30
Fuels.....	32
Automobiles and motor.....	33
Iron and leather and paper and printing.....	34
Batteries, glass and optical goods.....	35
Building construction and housing.....	35
Chemicals and oils.....	38
Foodstuffs and tobacco.....	40
Transportation.....	43
Public utilities, employment, and distribution.....	44
Shipping and finance and foreign exchange.....	45
United States foreign trade and Canadian trade and industry.....	48
<b>ALL MISCELLANEOUS TABLES</b>	
Debts to individual accounts (seasonal variation eliminated).....	19
Cases of business (shipments, stocks and unfilled orders).....	27
Cash and carrying statistics.....	27
Consumption of gasoline by States.....	28

#### PRELIMINARY SUMMARY FOR APRIL

Though higher than a year ago, industrial activity in April, as seen from reports of the iron, steel, tin-consuming, and textile industries, was lower than in the previous month. Unfilled steel orders, continuing the decline which began in March, were smaller at the end of April than at any similar period since last November, while automobile production, as reflected by factory shipments, was larger than in both the previous month and April a year ago. The April shipments of completed railroad locomotives, though larger than a year ago, were smaller than in March. Unfilled orders for locomotives on April 30 registered an increase, but the forward business was well below that of a year ago, while new orders for freight cars placed in April, though larger than in March, were only half as large as a year ago. Prices of iron and steel products declined in April from both the previous month and April, 1924.

Contracts awarded for new construction were larger in April than in either the preceding month or April,

1924, both in point of floor space and contemplated expenditure. Car loadings were smaller than in March, but were well above those of a year ago, all classes of goods sharing in the increase over April, 1924, except grain and livestock.

Sales by mail-order houses and 10-cent chain stores were larger than in either the previous month or a year ago. Bank clearings were smaller than in March, but larger than in April, 1924. Loans, investments, and deposits of banks continued to mount, while the earning assets of Federal reserve banks declined. Interest rates showed practically no change. Prices of stocks, both industrial and railroad, averaged lower than in the previous month, but were still well above a year ago. Business failures in April were more numerous than in either the preceding month or April, 1924, while the defaulted liabilities of failing firms, though smaller than a year ago, were larger than in March.

The United States Department of Commerce has become invaluable to the business world as an agency for the gathering of statistical information.

These ought to assist materially in forecasting more closely future industrial events and thereby preparing for them before they occur. It may in time even result in sufficient social control for the adaptation of industrial potentialities to human needs, once its accuracy and dependability have been demonstrated.

As to the increase in the efficiency of business expenditures the

<sup>1</sup> Contrast this usual situation, however, with that of the American Radiator Company, whose policy was described above.

same general trend is to be noted and seems promising. Affiliation with larger groups, the movement we have called combination, will certainly make for more efficient expenditure because of the superior facilities for the exchange of information and the securing of all possible economies. It may also be noted that every advance in production technique that cuts down costs by saving materials or time, is indirectly an addition to the efficiency of expenditure.

A similar observation will perhaps suffice for pointing out ways in which businesses may make better use of the wealth they consume. Their uses—their consuming—consists in producing. Consequently as they learn to produce more efficiently the efficiency of their consumption increases. Better production is the only necessary contribution of business to the more efficient use of wealth. This, however, is a problem in production. But it serves to illustrate the necessary connection between consumption and production and to demonstrate the close-knit nature of all industrial activity.

### 5. *Regional or National Uses*

Such wide ways of use as are in practice in national or regional areas are more difficult to explain than any other—upon psychological grounds. It is conceivable that we may, by study and experimentation, come in time to understand so well why it is that individuals make certain choices that we shall be able to predict what, in given circumstances, a certain individual will do. It is even conceivable that we may make some progress in understanding such a group as the family. But when we come to ask why it is that in Boston brown eggs command a premium and in New York white ones are preferred we are really up against so complicated a situation that psychological explanation seems useless to attempt.

In these circumstances we usually fall back upon some economic fact that seems determinative. There is always, however, a vast gap between the fact and the reaction—so wide indeed that these explanations are frequently challenged. The materialistic interpretation of events—that is, the reference of them to some likely concurrent circumstance—leaves a good deal to be desired. There is in fact no establishment of actual causal relationship at all. When, for instance, we say that there has been a change from a prepon-

derantly meat-liquor diet to a preponderantly cereal-sugar-vegetable diet because nature provides the latter group of foods more generously, we are on rather insecure ground. It may be that we should have made the change anyway on account of the superior efficiency of the diet. Perhaps we should even prefer cereals and fruits if they were more costly than meat and liquor.

This is only to say that we have not accumulated anything like the amount of data necessary for a genuine group psychology.



Harvesting the nation's new cereal diet. (Courtesy U. S. Dept. of Agr.)

We cannot certainly say *why* corn bread is not eaten in New England nor why dogfish is consistently refused in New York markets. We seem to be on safer ground when we cite the cheapness of the most widely used food-stuffs and the dearthness of the less used ones. But admittedly we cannot be certain with psychological certainty. When we are

told that the "royal purple" of ancient times was not other than the common cotton cloth of today, we wonder why we value cotton cloth so little and prefer silk and wool instead. Is it because wool is more suited to our winters? But we use wool in summer too. And silk is worn all winter now by most women who can possibly afford it. And these are dearer than cotton! Some better explanation than the economic one that habitually refers a complex event to a single fact is evidently needed.

We shall have to avoid, for the present, then, the attempt to explain just *why* it is that snails are eaten in France to our intense disgust and *why* it is that Frenchmen have no proper conception of pumpkin pie or ham and eggs. But we can say, as we have said in previous sections, that, from the economic point of view, certain habits would be more rational than those now in use, that they would be less a drain upon our soil and energy; and that



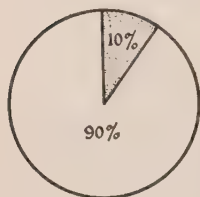
as we move in their direction the standards of life are raised for every one. We have not gone wholly wrong in this matter. We have already said that many adaptations that seem reasonable have been made. What, for instance, could be more rational than that the Pilgrims should have feasted at Thanksgiving upon wild turkey? And if we are to eat turkey at all surely Fall is the season. This is a comparatively trivial illustration. There are others more important.

Professor Carver cites the cases of the bean and the codfish cake: "The prosperity of this country is due in some small measure at least to the wise food habits that were developed under pioneer conditions. It would have been easy, perhaps natural, for those pioneers to have insisted on the kinds of food to which they had been accustomed in their European home. If they had cherished those prejudices they would have found them expensive luxuries in their new home. Instead of cherishing such prejudices they developed new food habits more in keeping with the new conditions. They managed to find ample nourishment and pleasure in foods that could be economically grown. Pork and beans furnish an excellent illustration. Here is a highly nutritious combination and reasonably well balanced. Though not quite so easily digestible as some others, and perhaps not well suited to the needs of indoor people, it served admirably for outdoor workers such as cattle men, lumbermen, and farmers. At the same time it was economical. Hogs ran wild in the woods and found their own living. They were highly prolific and multiplied rapidly. Beans were easily grown and required no expensive milling or processing to prepare them for food. Besides, being legumes, they tended to replace rather than to exhaust the nitrogen of the soil. The housewives who mastered the art of making this highly nutritious and economical combination into a delectable dish were important factors in laying the foundation for the present prosperity of our



Distinctly American: the modern form of the pork and beans developed by Puritan housewives.

country. Codfish balls furnish another illustration. This combination of codfish, which the ocean furnished in apparently inexhaustible quantities, potatoes which could be grown in every garden, and pork fat, a by-product of hog raising, was a well balanced and nutritious combination made agreeable by the housewives' art. Time would fail us to speak of pumpkin pies, green



Of all the corn raised in the United States only ten per cent, as shown by the shaded section on this graph, is used directly for human food.

corn, succotash, hasty pudding and a multitude of other delicious compounds that delighted as well as nourished our ancestors at low cost in human labor. Mention must be made, however, of Johnny cake, one of America's chief contributions to the happiness of mankind, made of the meal of an indigenous cereal, the largest crop now grown here, and the most magnificent corn grown anywhere in the world. Even the despised buckwheat, grown on many soils as a catch crop, but grown mainly on soils too poor and cold for anything else, has yielded to the art of our cooks and given us buckwheat cakes."<sup>1</sup>

Equally important is the fact that wheat seems to us desirable as the main item of our diet and that wheat is the one food plant that is adaptable to the semiarid lands that lie just east of the Rockies. Our refusal to eat corn in as direct a form as we eat wheat is not so rational. We feed it to animals and lose much of its efficiency. But it must be said that, though we are somewhat irresponsible here in the first instance, we have fairly well adopted a rational diet of meat. For it seems that of all good converters the hog is most efficient—unless we consider milk. The cow is really our most efficient animal. She is capable of converting roughage—hay, oil cake, and the like—into human food. And when she has done this for years there is still her flesh to be eaten. But the hog comes close after. Of all the animals whose flesh we eat, the humble hog is most efficient in converting grain into meat.

However, as Professor Davenport says, we lose a good deal by not eating most of these cereals ourselves, though we should have to admit that meat sometimes comes to us almost free—as when

<sup>1</sup>T. N. Carver, *The Economy of Human Energy* (Macmillan, 1924), pp. 43-44.

cattle live on the non-tillable lands of the western ranges or sheep crop the stony hill-pastures of New England. ". . . the moment plow land is seeded down to pasture, that moment is its producing power vastly diminished—reduction number one. Again all animal foods are from six to thirty-six times as expensive in food values as are the grains from which they are made—reduction number two. That is to say that to feed grain to an animal and then eat the animal is to sacrifice quantity to appetite and to diminish physiological welfare at a ratio of twenty or thirty to one. Animal foods we must have to be well; but, except for pork, they can be produced when necessary from field crops that we ourselves cannot consume and yet are necessary to good farming—clover and alfalfa, for example."<sup>1</sup>

The relative efficiency of animals in converting vegetable matter into meat may be seen from the following table:

HUMAN FOOD PRODUCED FROM 100 POUNDS OF DIGESTIBLE MATTER CONSUMED<sup>2</sup>

ANIMAL	EDIBLE SOLIDS LB.	ANIMAL	EDIBLE SOLIDS LB.
Cow (milk).....	18.0	Poultry (eggs).....	5.1
Pig (dressed).....	15.6	Poultry (dressed).....	4.2
Cow (dressed).....	9.4	Lamb (dressed).....	3.2
Calf (dressed).....	8.1	Steer (dressed).....	2.8
Cow (butter).....	5.4	Sheep (dressed).....	2.6

It is by such exact criteria as this that the consuming habits of a nation ought to be guided. Yet the matter is much more complex than at once appears here. It may be profitable to pursue the line of inquiry we have opened up somewhat further to illustrate at once the difficulties in the way of rational choice for a nation, even when its intentions are good, and some of the means available for overcoming these difficulties—in so far as they are attributable to lack of knowledge, at least.

We have seen by our last illustration that milk is the most efficient form of animal food. But after all milk is not the most

<sup>1</sup> E. Davenport, "Wanted: a Program of Food Production," *The Country Gentleman*, Jan. 26, 1918.

<sup>2</sup> W. H. Jordan, *The Feeding of Animals*, 1901.

efficient of all the kinds of food. For normal, adult persons, it is no different from other foods, which is to say that there are no special properties in milk which makes it the super-food implied in certain advertisements of milk dealers and others interested in its voluminous sale. All foods are broken down in the digestive process and the high cost of living has made the dietitians' problem one of searching for the cheapest energy-yielding foods.

Of all animal products, milk, perhaps, still is cheapest, considering its food value. But in comparison with cereals for instance, it becomes a luxury to be indulged in only by the luxury-loving. Under present conditions milk is to be ranked among the more expensive foods—the elements of nutrition can be obtained more cheaply from other sources.

Two tables are here included which make this contrast. They are taken from the report of the Governor's Tri-State Milk Commission (printed by the State of Pennsylvania, 1917). They were prepared for the Commission by Dr. Alonzo E. Taylor.

### SOME FOOD VALUES COMPARED

#### 1. Food Value of Milk and Other Animal Products

ARTICLE	WEIGHT	PROTEIN PER CENT	FAT PER CENT	CALORIES
Milk.....	1 lb.	3	3.5	300
Butter.....	1 lb.	..	85.	3600
Cheese.....	1 lb.	25-33	25-30.	2000
Cheese, lean.....	1 lb.	40	3.	900
Eggs.....	1 lb.	11-12	9.3	600
Beef, fat.....	1 lb.	15	26.	1400
Beef, medium.....	1 lb.	19	7.	900
Pork, fat.....	1 lb.	13	26.	1300
Pork, lean.....	1 lb.	18	13.	900
Fowl.....	1 lb.	13	12.	750
Herring.....	1 lb.	11	4.	370
Cod.....	1 lb.	8	..	160

Thousands of Calories

Corn	3,124	
Wheat	1,788	
Milk	711	
Beef	130	

This chart compares on the per acre basis the value in calories of four important foods. (From Farmers' Bulletin No. 877, U. S. Dept. of Agr.)



2. *Milk Compared with Grains, Cereals, and Vegetables*

ARTICLE	WEIGHT	PROTEIN PER CENT	FAT PER CENT	CALORIES
Milk.....	1 lb.	3	3	300
Flour.....	1 lb.	10-11	..	1500-1600
Oatmeal.....	1 lb.	14-16	6	1700
Bread.....	1 lb.	8-9	..	1200
Rice.....	1 lb.	6-8	..	1600
Macaroni.....	1 lb.	9-10	..	1600
Sugar.....	1 lb.	..	..	1850
Split peas.....	1 lb.	24	..	1600
Peanuts.....	1 lb.	19	29	1900
Raisins.....	1 lb.	3	3	1400
Potato.....	1 lb.	1.5	..	350

Evidently, then, a population seeking after wisdom in consumption will treat milk—for adults at least—only as a by-product and will confine its diet largely to the more efficient foods. Yet, it will not give up meat or even milk altogether—for these are sometimes produced nearly free.

We have used the illustration of foods only because they form a readily available example. But in all truth it must be admitted that the example is somewhat unfair. For one can reduce foods to calories and one can therefore measure their efficiency. This would be much less true of the other necessities of life such as clothing and shelter, though one can say that each person needs so many cubic feet of air space and so many pounds of wool and leather for minimum protection against the weather. But these are only minima and admittedly bad criteria. For clothes are more than protection and living quarters more than shelter. In a way food is more than nourishment too, however, so that we have to fall back on pointing out values and leaving the whole matter to individual determination.

In reality that is pretty much what we do. Positive consuming habits cannot be forced. If, when Boston housewives have been informed that white eggs are every bit as good as brown ones, and if they still persist in paying for the kind they prefer ten or fifteen cents more a dozen—well, what is there that can be done about it? And if people everywhere have been appraised of the virtues of corn bread and still prefer to pay from six to thirty-six times as much for it in the form of pork—what is there that

can be done about that? After our experience of the prohibition of alcoholic beverages, it seems unlikely that we shall try sumptuary legislation of this sort on a national scale concerning any diet matters of less importance.

One thing that can be done is, however, to institute some sort of control over habit-influencing agencies of nation-wide scope. Another, possibly, is the carrying on of frank propaganda for breaking down prejudices. The most important of the habit-influencing agencies at the present time is commercial advertising. In the advertising idea there are potentialities of progress—but not as it is carried on at present, without reference to the social welfare involved in its results. Not only is the expense of advertising largely a waste but also a far greater waste is involved in its temptations to unwisdom in consuming. And these temptations are not confined to individuals or to small groups, but extend to whole nations. A socially directed advertising, however, that devoted itself to the dissemination of information concerning rational alternatives, and that helped to make choice habits flexible in the interest of progress, might be a worthy civilizing instrument.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. How do group choices differ from individual choices? What types of group choices are there?
2. What member of the family is most often charged with the duties of group choices?
3. Mention ways of improving family choices. What would be your tests of good choices?
4. What part can the family budget be made to include better expenditure? Work out a sample budget of your own.
5. How do the processes of choice and expenditure apply to industrial groups? Where do these differ from individual and family choices and expenditures?
6. Are choice and expenditure habits in different parts of the country different? Give examples. What factors are tending to reduce this difference?

*PART IV*

RAISING THE LEVELS OF LIVING THROUGH COMPREHENSIVE  
SCHEMES FOR REORGANIZATION





## CHAPTER 29

### RELATIONS BETWEEN ECONOMIC, SOCIAL, AND POLITICAL CONDITIONS

Economic conditions are so closely bound up with social and political, that any important change in one must bring changes in the others. Any plan for comprehensive reform in one of these fields, therefore, must take account of the others as well. We have been speaking, in earlier chapters, chiefly about economic problems of a specific sort, and it remains now to consider some of the broader social aspects of raising economic standards of living. We are going to consider several very comprehensive plans of economic policy. One of these would leave the situation fundamentally as it is at present. The others propose far-reaching change, though they differ in the extent and the kinds of changes they propose. We shall take up, one by one, these various policies and try to see first of all what sort of economic system each outlines, then some of the social and political bearings of each.

It may be well, first of all, to get a general idea of what we mean by social and political as contrasted with economic. It is, of course, not possible to make sharp distinctions here or ironclad definitions. But we have been giving a rough meaning to the word economic, implying that it includes especially those activities which are more or less directly concerned with the production and consumption of material goods. Broadly considered, these activities include a very large part of human life. We are constantly consuming material goods and almost every occupation or avocation of a human being contributes to or influences production in some way. By "political" we mean to indicate here those activities which are concerned with government; that is with directing, on a large scale, men's relations to each other. This includes insuring social peace, and coöperation in activities besides those of a strictly wealth-producing sort. In the word "social" we include, very broadly, all the other activities and relations into

which people enter: the circles of friends among which they move, education and amusements, their charities, their scientific, literary, and artistic pursuits.

It can easily be seen how a man's economic status will affect his social and political status. If he is a man of wealth, exercising a powerful position in the world of production, he is apt to be politically powerful also, to exercise an influence in councils of state. He and his family are apt to be socially respected, to have what



Where economic and political programs are fused into social legislation.  
(Photo Ewing Galloway)

is known as prestige. They are apt, as we have seen in the chapters on standards of living, to possess opportunities for intellectual development and for passing their time in pursuits which are congenial and enjoyable. Likewise, on a low economic level, certain social and political consequences may be expected.

When we are considering a general economic system, too, we may expect certain social and political conditions to be associated with that system. Having wealth produced in a certain way and consumed in a certain way means that society must be organized in a certain way. It means also that wealth will be distributed and enjoyed in certain ways. For example, the system known as "feudalism," characteristic of the Middle Ages, was not only "economic" but "social" and "political." Based upon serfdom,

it secured the production of wealth by maintaining a subject class only a little above slavery which was compelled to do manual labor and to obey the orders of hereditary superiors. There the economically inferior were the politically inferior, having little or no voice in the management of national or city affairs. They were the socially inferior, enjoying few if any opportunities for intellectual development and for free enjoyment. When a system like feudalism disintegrates and passes into another system, all of its parts change too, with more or less unequal rapidity. Political changes cannot far outrun economic and social. That is why political revolutions which are not based upon a fundamental economic and social change are apt to be only temporary.

It is, of course, beyond the scope of this book to analyze all the aspects of present-day society or to follow out in detail the remote effects which an economic change might have, but something of these interrelationships can be indicated briefly.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What is meant by "social" and "political" as contrasted with "economic"?
2. Does a scheme for economic reorganization have to take account also of existing political and social institutions?

## CHAPTER 30

### INDIVIDUALISM

#### 1. *The Meaning of Individualism*

One fundamental ideal or principle of social philosophy which influences legislatures and the general public in considerable de-



A castaway. The nearest approach to ideal individualism.

gree, is that of freedom—individual liberty. This ideal is particularly in accord with our American traditions and it is surrounded by no small amount of emotional glamour; in fact it has been identified closely with patriotism and idealism itself. Looked at more closely, this idea of individual liberty discloses itself, not as a synonym for patriotism in general, but as one

particular way in which certain philosophers have hoped to achieve national and individual prosperity.

The ideal of individualism was much talked of in the early nineteenth century economic discussions. It was invoked in opposition to such proposed measures as the forming of trade unions and government regulation of industry. What is the bearing of the general ideal of freedom on such particular issues in economics and government?

#### 2. *The Development of Individualism*

If we look back to the eighteenth century, we shall find social philosophers preaching individual liberty under very different conditions and in opposition to very different adversaries. Locke, Rousseau, Jefferson, Adam Smith, and other apostles of liberty,



when they advocated this ideal, were thinking of the outworn and irksome regulations which still hampered industry as survivals of the mercantilist régime. These regulations themselves had once served a good purpose. Strong national governments, strong kings, had been necessary in order to sweep away the medieval guilds; in order to place industry under strong, energetic, and efficient managers; in order to coördinate national finances and taxation; in order to rid the seas of pirates and to conduct exploration and colonization in the new countries.

But when that epoch had passed, when a certain amount of political stability and prosperity had been secured (that is toward the end of the eighteenth century) business men began chafing under governmental restraints. They saw that these restraints in many cases were unintelligent. The edicts made by Queen Elizabeth, for example, dictated exactly the width and weight that a piece of cloth must have, and, in fact, the exact detailed manner in which most manufacturers should carry on business. Manufacturers now believed there were more efficient methods, and demanded the right to use them. Government regulations were unfair; they favored certain classes and individuals. Court favorites, even, somewhat earlier, had been granted monopolies on the importation of certain commodities, such as pepper, silk, and wine, and there were eighteenth century survivals of this same sort of strict surveillance of business. Under these conditions it was no wonder that business men were demanding freedom to manufacture and trade in their own way without restraint. At just about this time political reformers were asserting the right of the individual to a voice in electing his government, and social reformers and poets were preaching the brotherhood and dignity of all mankind, the right of every human being to life, liberty, and the pursuit of happiness.

If we come down to about the third decade of the nineteenth century, we find that conditions have changed again and that individualism, although abstractly defined in the same way, really has different connotations. It connotes in 1830 the granting of still further power to middle-class industrialists. There is now hardly any question even of despotic control by landholding aristocrats. Their power, though surviving, is definitely on the wane. There is no serious objection to allowing the enter-

prising trader or manufacturer to start a new venture and to do pretty much as he pleases in conducting it.

But a new economic and social class is beginning to assert itself—the working class. Laborers are beginning to demand a voice in political control and a greater share in the world's new prosperity. They are beginning to protest bitterly against the



One conception of governmental functions would restrict them to police activities; the other would have the government play an active rôle in social life, not only repressing and punishing but also encouraging and even doing. (Photo Hine)

low wages and unspeakable sanitary conditions prevailing in the mushroom factory towns which have grown up rapidly in response to the introduction of machinery and the great demand for its cheap products. At this time, we find business men, bankers, and factory owners appealing to the ideal of individual liberty to prevent the worker from effectually revolting against them. The cry of these captains of industry is that Anglo-Saxon traditions demand freedom of contract, the right of the individual worker to bargain

directly with the individual employer. And upon this basis they argue against the intervention of trade unions between employer and employee, dictating arbitrarily to both how the employer should manage his business and under what terms the worker should work. We find these captains of industry also protesting against encroachment by the government upon business. "That government governs best which governs least," they insist. Reminding the people of past tyrannies and inefficiencies of kings and ministers of finance, they insist that the people shall not surrender an iota of their new-found liberty to any new bureaucracy. The government should keep its hands off industry except perhaps to stand by as a ploiceman and intervene against the commission of the most flagrant crimes. It may perhaps prevent or punish actual damage to life, limb, and property (especially when it is the worker who commits these offenses); it may organize an army to defend

the nation against foreign powers; it may collect taxes; it may even exercise a few other such traditional functions; but it is contrary to the public interest for it to attempt in any way to supervise or regulate the conduct of industry itself or the relations between the worker and the owner of wealth.

Reformers of this period point out the terrible sufferings of the poor, of the child worker in the mines working up to his waist in water all night, the mother of a family who cannot earn enough to keep her family alive. Are these all indications that government should take a hand if alleviation cannot come in any other way? The answers of individualists here are various, but all to the same point. It is better in the long run that government should not intervene. Some men, content with the state of affairs, reply, "The poor we have always with us," and insist that typical as the condition may be, it is the will of God that this should be so; suffering ennobles, and the Lord's will should be allowed to pursue its own purposes. Selfish-minded factory owners of course resent interference with their own property rights. Even sincerely altruistic philosophers like Herbert Spencer, writing in the second half of the century, believed that government interference in these matters would, if carried to any considerable extent, do more harm than good. Governments are stupid and bungling, they said; human progress is a tremendously complicated thing, full of blind forces which will slowly but inevitably work out for the best. Let us be optimistic, hope that these things will straighten themselves out, but let us not try to rush them or to steer the course of progress too exactly or we shall do more harm than good!

### *3. Darwinism and Economic Individualism*

Another scientific theory that originated toward the end of the nineteenth century contributed to constructive individualism. This was the doctrine of the survival of the fittest, based upon Darwin's theory of natural selection in the animal world. The theory as applied to biology held that progress has come about through the elimination of the unfit, in the struggle for existence during many successive generations. By analogy, it was argued that human progress, too, comes about through eliminating the unfit. Ruthless as it may seem, we are doing the cause of human

progress no good by pampering the industrial weaklings and allowing them to perpetuate themselves or to build up such defenses that they will be immune from struggle. Let nature take its course and all will be well in time. So ran the argument of the defenders of economic individualism. If we can only secure an economic world in which there will be absolutely free competition, nature will automatically bring progress, prosperity, the survival of the fittest. We are now, they say, in a transitional state in which there is suffering, a little more perhaps than will exist once the age of machinery is well under way. But we must learn to tolerate the presence of suffering, starvation, and disease, for the sake of the society of tomorrow.

Where the poor, tubercular child or the stupid, low-grade worker is forced out there will remain the intelligent and physically capable citizen of tomorrow, who is able to fight for himself under conditions of free opportunity and win a place near the top. Strong and efficient leaders will be developed by this means. As Nietzsche urged in Germany at this time, the superman will rise on the fallen bodies of the weaklings. Inspired by the possibility and the hope of a free road to power and prosperity for himself and his family, the man of potential strength will exert all his energies, will sharpen his wits to think of new ways of improving methods of production. In rising to the top himself he will inevitably benefit humanity.

#### *4. The Present Significance of Individualism*

It will be noted that these arguments, all of which were very influential throughout the nineteenth century and are by no means unheard of today, are in principle the same as those which Adam Smith urged against the mercantilists. Let nature take its course. Man is led, as by a hidden hand, to benefit society in seeking to benefit himself. But the forces which nineteenth century writers feared as obstructions to "nature" were different from the obstructions which Adam Smith opposed. Eighteenth century revolutionists opposed an aristocratic, hidebound government, dominating the people; nineteenth century individualists feared a set of institutions created by the people themselves, the institutions of a more or less democratic government. Admitting that free competition was better than the restraints of an



eighteenth century government, does it follow that free competition is better than regulations enforced by a twentieth century government—more responsive to the people's will, and more in possession of scientific method? Let us consider the issue as it applies directly to the present state of affairs.

In the first place, absolutely free competition is and always has been impossible, an imaginary ideal. It never existed and could not now exist. There have always been restraints upon the conduct of individuals in economic activity. The laborer, for example, in the early nineteenth century was prevented by the fear of hunger for himself and his family from bargaining freely with his employer. Market conditions, industrial institutions, collective forces of all sorts, have determined the conduct of the individual, however much he may have thought he was acting spontaneously, and they will always continue to do so.

But there is a very real significance in the ideal of economic individualism today. Even though it may be impossible to secure absolute freedom of competition, it is possible to work in that general direction instead of toward building up new and complicated social mechanisms. We can, as a general policy, try to limit government interference; we can in all disputed cases be biased in favor of the rights of an individual as opposed to those of a corporation. We can legislate against trade unions, employers, organizations, active groups of all sorts within the economic order. We can abstain rigorously from government ownership and operation in specific industries. We can, if we choose, abstain from creating a government parcel post system or we may even give over the postal system into private hands. We can pass laws against trusts and large-scale corporations and dissolve them. Today, economic individualism means such a general predisposition in favor of increasing freedom of action for individuals and small groups in industry.

Some of the old arguments pro and con still apply today. Will freer competition tend to develop individual initiative and ability, the production of leaders? Will it tend to eliminate the unfit individual? Will it tend to lower prices by compelling producers to cut rates against each other, to be satisfied with smaller profits and to improve their methods? Will free competition add an élan to industry that no bureaucratic system could attain, giving

outlet to man's sporting instincts, his love of struggle, his desire for self-aggrandizement, mastery, and possession? That an individualist policy will do these things is the belief of its defenders, and a strong one, backed up by examples from history and from science.

### 5. *The Opposition to Individualism*

We need not attempt to solve the problem, since it is essentially debatable, but we should at least analyze one or two points which have been raised in criticism. In reply to the argument based upon Darwin's theory of the survival of the fittest, it is urged that economic struggle produces rather the survival of the unfit. What sort of worker emerges from the terrific grinding misery of unrestricted competition? Is it the self-respecting, honest, public-spirited, and intelligent man as the individualist assumes? We must remember that even in the animal world man is not the only animal that has survived. The reptile, the worm, the disease germ have also survived. It may be that the survivor of industrial misery will be the worker with the lowest standards, the one who is willing to work for the least wages, who demands least in the way of comfort, education, leisure, power, for himself and his family, who is willing to be a docile slave.

What type of leader will emerge from the struggle? Will this superman be a genuinely ideal human being? Unrestricted scrambling for wealth under ruthless conditions may well produce a shrewd unscrupulous man with little public spirit or sympathy for others, with little time for art or the enjoyment of life, with a mind grimly set upon material production and the extension of his power over others. Cannot government profitably take a hand to direct evolution toward the survival of the morally, mentally, and physically fit or to prevent standards from being lowered too far, by casing up the struggle so that there will be time for the cultivation of the finer qualities in human beings?

To speak in more distinctly economic terms, it is argued that individualism is inconsistent with the whole mechanizing movement of the age. Individualism means the perpetuation of many small independent units. Mechanizing is essentially the binding together of these units into organisms where the individual part loses its independence. As soon as people began using machin-

ery, it is argued, they made individualism obsolete. Machinery of the modern sort demands concentrated wealth to own and operate it. No one man can do so. It demands an army of trained and specialized workers, in fact, wheels within wheels. It demands, in short, the development of a social machine coördinate with the development of machines of steel.

The tendency of the last generation toward industrial consolidation seems to demonstrate this point. With industrial consolida-



Collective effort built this; the inference is inescapable; but we sometimes attempt to avoid the logical further inference that more collective effort is needed. Sometimes we say that what we need is more individual enterprise. No individual, however, ever built a skyscraper. (Courtesy U.S. Army Air Service)

tion, as we have seen in previous chapters, comes a great saving of energy and greatly increased efficiency. To try to split society into individual units again would not only be impossible, but would, if it were possible, bring about all the old inefficiencies, the duplication of efforts by individuals, the frustration of efforts through opposition, when the obvious need is for all to devote their energies to a genuine coöperative effort toward a common end.

Advocates of collectivism in general also urge that the new industrial machine shows distinct signs of becoming acutely

sensitive to social demand, anticipating and providing for the wants of people in a genuinely scientific fashion; to destroy this machine, therefore, would throw us back upon the old blind, hit-or-miss method of producing for the market a certain amount without any idea of what the demand really is.

Another reason why no great step toward individualism can be made at present is the power and determination of present organized workers. Whatever be the justice of the case, there is no doubt that organized labor is now, in most western countries, strong enough to resist total disintegration. It is winning a voice in management which no isolated worker could hope to achieve, and it will not surrender that to return to the autocratic domination of an individual enterpriser.

Employers and large-scale producers, too, seem to be well satisfied with much that is collectivist in our present social order, satisfied, for example, with the tremendous machinery of banking and credit that has grown up with a certain body of ironclad regulations, satisfied that the government should exercise a control not only over currency but over banking methods for the prevention of frauds and the securing of certain standards of efficiency. There is little disposition to question the value of such government enterprises as the postal system, whatever may be the desirability of further extension of government activities.

Practically speaking, then, individualism today does not mean to anyone an ideal of complete or extreme freedom. It does not connote philosophical anarchism. It implies a moderate tendency toward relaxing social control in doubtful cases. The desirability of economic individualism at present, therefore, cannot be debated in general terms. We have seen the advantages to be looked for from movements in this direction and the dangers of them. It remains, then, to consider any particular case such as the operation of railroads in the light of these advantages and drawbacks.

#### 6. *The Development of a Mean*

As a rule, the individualist in modern economic society is a man who is fairly well satisfied with most fundamental aspects of the present system; what he means by calling himself an individualist is not that he desires any wholesale disintegration of what is, but that he opposes the introduction of extensive socialistic



schemes. He may admit, frankly, that the present system is a compromise between individualism and socialism and will defend it on that account. He will concede at the same time the advantages and drawbacks of both general ideals, but will feel that the present system contains many of the advantages of both individualism and collectivism and as few of the drawbacks of each as reasonably could be expected. His outline for a successful social order would be one that had just enough opportunity for a free competition to develop individual initiative and to permit the traditional returns to successful enterprise, but not enough to permit ruthless or excessive competition. He would favor an order in which groupings of individuals were allowed to form and function but not to become too powerful. In that way, he would say, society can be prevented from going to either extreme, toward crystallization or toward anarchy.

Such an answer seems to many the part of common sense or moderation, the golden mean. But it must be remembered that it leaves many of the most serious problems unsolved. It ignores the arguments of those reformers who urge that the whole system is unjust and that further attempts to patch it up can only achieve the temporary pacifying of the worker. It has the proved advantage of being at least workable, or having been tested by time, whereas other schemes must depend upon theoretical claims to superiority. But it is fundamentally a surrender to the blind forces of nature. It is an admission that man is, so far, incapable of directing economic and social progress as a whole. It is the policy of muddling through which always has been acceptable as the easiest way, especially to the Anglo-Saxon world, but it is an evasion of many fundamental issues. More particularly, it is an evasion of the issue as to just what parts of industry, if any, should be allowed to move spontaneously toward further centralization, and how far. The attempt to stop centralization, by such means as the Sherman Anti-Trust Law, necessitates an active interference by government in industry, which is in itself a violation of one fundamental principle of individualism. Apparently the theory as a whole is impossible at present; some sort and degree of collective control over industry, either by governments or large corporations, is inevitable. Like all other very abstract social policies, the word individualism becomes meaningful only when

we fill it in with many specific decisions, so as to indicate concretely just where the dividing line should be made between the two extremes.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What is individualism?
2. Give a brief résumé of the main points leading up to our present philosophy of individualism.
3. What is the present status of individualism in this country? Mention some specific evidence which gives you reason to think that changes are taking place.
4. Why is there opposition to this change? From whom is it coming?
5. What seems to be the way out of this conflict?

## CHAPTER 31

### COLLECTIVE BARGAINING

#### 1. *The Development of the Collective Bargain Between Employer and Employee*

The ideal opposite to individualism is collectivism. We have already considered some of its implications, its virtues and defects. Indeed in other places in this book we have recognized many times the general values of coöperation, and of centralized control, for the saving of energy and for the increase of efficiency. There is no need to dwell further upon these. But there are several brands of collectivism, all claiming these values and each claiming to realize them more perfectly than the others. We shall consider, then, one by one, some different ways in which social and governmental control may be extended over industry. As we go along, it will be important, as before with individualism, to consider not only the economic consequences, but the social and political.

The first of these specific plans is that of collective bargaining between the employers and employees of urban industry. We noted, in regard to the early nineteenth century, that a fundamental claim of the individualist factory owner was the right of the individual employer and employee to bargain with each other. It was urged that for any outside body whatever, government or union, to step in, was a violation, not only of the right of the employer, but of the worker as well. Instances could be given in which individual workers were content to accept lower wages or longer hours, and in which the union or some philanthropic government official sought to prevent him from doing so. Was not this, then, an injury to both parties? That question has never been settled theoretically, but collective bargaining has developed in spite of opposition. Apparently enough workers have preferred to act as groups rather than as individuals so that the movement toward bargaining by means of unions has grown consistently ever since the beginning of the nineteenth century.

## 2. *Craft and Industrial Unionism*

The history of the development of trade unions we shall not follow in detail, but it is well to be aware of two main lines along which unionization has proceeded. One type of union generally referred to today as the craft union is based upon the type of work done. Members of a single group are people who do the same or approximately the same work. The American Federation of Labor



An electrician, probably a member of an electrical workers' union.  
(Photo Hine)

is largely made up of such unions. There will be an organization, for example, of electricians in a given town, one of plumbers, and one of steamfitters. Electricians' unions in various towns will organize into state and national organizations. There may be, in the case of a large and important craft, subdivisions; but the basis of mutual affiliation is essentially that of the craft.

Another type of unionism which has come into prominence lately is the industrial union. It is based, not upon the kind of work done, but upon the product made, or, in general, upon the organiza-

tions of workers of many types in carrying out some coöperative enterprise such as railroading. An industrial union, for example, might consist of all the various types of workers who contribute to the making of shoes. This would include, of course, not only the shoe machine operators, but electricians, carpenters, steamfitters, and clerical workers. Thus in the industrial union, craft lines are erased and affiliation is based upon the total product that emerges.

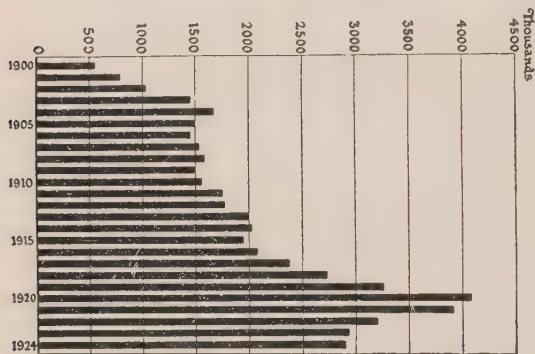
Of the two types, the craft union is at present the more strongly intrenched, and it has many elements of superiority. Its membership is more apt to be homogeneous. Its members, doing the same





Workers in the steel industry: (1) Italian; (2) Irish; (3) German; (4) Lithuanian; (5) Polish; (6) Serbian; (7) Russian; (8) Slovak; (9) English; (10) American. (11) Interior, of a steel mill. The difficulty of organizing large groups of men for collective bargaining is apparent when the different nationalities involved are considered. (Photos by Hine. Drawing by Vernon Howe Bailey. Courtesy Interstate Steel Company)

sort of work, are likely to be able to meet on a common intellectual and social level. Thus they have a certain advantage in being able to coöperate and act as a solid unit. The industrial union, by contrast, is made up of an extremely diverse membership. Some of its members are skilled and others unskilled; some educated and prosperous, and some not. It has proved extremely difficult for members of an industrial union to coöperate amicably and efficiently on any but the most simple and urgent matters, such



The growth of the American Federation of Labor has not been evenly continuous. When times are good and work plenty, workers are less inclined to realize the value of the union as a means of better bargaining. When conditions of employment are less favorable workmen are much more apt to turn to the union as an aid in time of trouble. (Official statistics of the A. F. of L.)

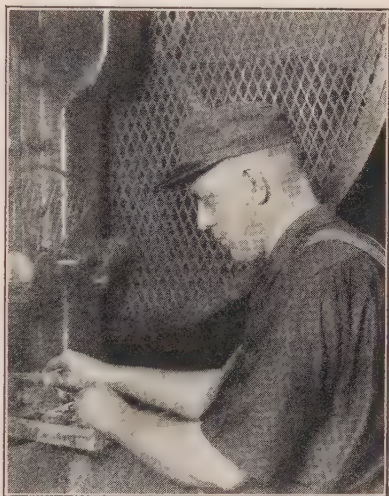
as a fight against a common employer, where all minor difficulties can be forgotten for the moment. As soon as these larger questions are settled at all satisfactory minor conflicts are bound to come up; for instance disputes between the skilled and the unskilled, or concerning policies toward discipline. Industrial unions have tended, as we shall

see, toward greater radicalism and violence in policy. Craft unions, especially those made up of skilled and prosperous workers, have tended to be fairly conservative and to be willing to deal diplomatically with their employers. They observe certain standards of responsibility in supervising the quality of work done by their members and holding to agreements made. The policy of the industrial union, on the other hand, tends to be one of undisciplined force.

There are certain influences at work to strengthen industrial unionism and to undermine the craft unionism. The whole tendency of the machine age is towards destroying individual crafts. Countless occupations of the past which demanded skill and

responsibility, which had traditions and a fairly solid organization, such as shoemaking and tailoring, have been displaced by machinery or split up into many small subordinate and specialized crafts. The makers of shoes now, instead of being men of a similar occupation, are, as has been said, men of widely different occupations. This process of craft disintegration is constantly going on. Every new machine that is invented, every industrial process of amalgamation among formerly independent units, tends to modify the nature of the craft. Accordingly, craft distinctions are constantly destroyed. The members of a union continually find that they are composed of slightly different groups having divergent interests, or that instead of being a group of skilled artisans they have become machine tenders whose former skill is now useless. Of course, these changes do not happen with lightninglike rapidity, and organizations are modified so as to approximate the changes in industry itself, but the irresistible tendency is toward throwing the members of all crafts into a common aggregation of unskilled laborers, toward displacing the craftsman by the more or less unskilled machine operator.

As the craft lines merge, industrial unionism grows. The group in operation becomes a vast, indiscriminate conglomeration of workers having different functions, yet not clearly marked off into exclusive groupings on the basis of kind of work done. All of them feel themselves more or less on the edge of a precipice, in danger of having their livelihood threatened. Thus a new loyalty tends to arise, that between men who work at the making of one product, and executives who receive their pay from the same



Operating a punch press requires little skill. Almost any worker can be trained to do it in a relatively short time. The man in the picture is obviously too good for his job. (Photo Hine)

source, who coöperate in the same industry. Group consciousness is being strengthened among all coal workers, among all steel workers, and all railroad workers, at the expense of the narrow and precisely drawn craft union grouping. This new conglomeration has the strength of being located in approximately the same spot. It can concentrate its forces, whereas electricians, for example, are scattered all over the country. It has the advantage of being able to direct its forces against a single enemy, either a common employer or a group of similar employers whose interests are more or less identical, whereas the organization of craft unions has to direct its energies against a diversity of scattered employers some of whom may be just and some unjust, and who, in any event, cannot be faced as a single enemy.

### 3. *Full Collective Bargaining*

In spite of these forces the struggle is by no means decided between these two types. Both are in existence and functioning. The craft union still maintains by far the greater prestige and the greater ability to act quickly and efficaciously in a dispute. Strikes of industrial unions have generally proved hard to organize and conduct. When we speak, therefore, of collective bargaining we mean usually bargaining between federated craft unions and employers.

There has been a development of another kind in collective bargaining accompanying the increase in the completeness of organization on both sides. The simplest type of collective bargaining occurs when workers appoint a spokesman to present a request or a demand to a single employer. The weakness of this mode of bargaining from the standpoint of the worker is obvious. The ringleader, as he is called, can be dismissed. The demands of the workers can be ignored. If the workers strike, they can be quickly replaced with others. A somewhat more complex system exists when the workers in a factory are organized with those of other factories either along craft or industrial lines. Where they are allied with other workers of the same craft elsewhere or with other units (factories, mines, etc.) in a single industry, they can strike simultaneously. It will be, of course, possible for the employer to secure other workers, but the more extensive and elaborate the union, the more difficult it will be for the employer



to secure trained workers and the more pressure can be brought to bear upon such workers not to hamper the success of the strike.

The third stage of development constitutes what is known as full collective bargaining. This exists when both employers and employees become rather completely organized. For this it was necessary that there should develop employers' associations as well as workers' associations. Such associations have developed rather recently in this country and in Europe, usually following and paralleling the organization of the employees and intended chiefly to oppose them. Thus, we have employers' associations on both craft and industrial lines. We have barbers' unions and master barbers' associations. We have bituminous coal workers' organizations and associations of bituminous coal operators. The activities of these employers' associations have been in part militant, just as the activities of the unions have been. Where strikes have occurred, the employers have retaliated by lockouts often, or by concerted agreements to close down work until their demands have been met. In some cases a certain employer who is in trouble is tided over financially by the organization of which he is a member, just as certain striking unions are tided over by sympathetic groups.<sup>1</sup> When unions have adopted violent tactics, employers' organizations have not been slow to go even further, and have employed "strong-arm" forces, "labor spies" or under-cover men, and special police.<sup>2</sup> When unions have attempted to agree upon a boycott of the products of such firms, these firms have retaliated by blacklisting

## UNION DIRECTORY

HERE'S YOUR UNION, WHEN IT MEETS, AND WHERE

**The International Ladies' Garment Workers' Union**  
3 West 16th Street, New York City  
Telephone (Thomas 714)  
LADIES' GOWN DEPT. (Room 410)

**The Amalgamated Ladies' Garment Cutters' Union**  
Local No. 10, L. C. W. U.  
100 West 16th Street  
ELECTIVE BOARD MEETS FIRST THURSDAY AT THE OFFICE OF THE UNION

**MISCELLANEOUS TRADES OF GREATER NEW YORK**  
DISTRICT COUNCIL  
100 West 16th Street  
ELECTIVE BOARD MEETS FIRST THURSDAY AT THE OFFICE OF THE UNION

**Italian Cloak, Suit and Skirt Makers**  
100 West 16th Street  
ELECTIVE BOARD MEETS FIRST THURSDAY AT THE OFFICE OF THE UNION

**SAMPLE MAKERS' UNION**  
Local No. 10, L. C. W. U.  
100 West 16th Street  
ELECTIVE BOARD MEETS FIRST THURSDAY AT THE OFFICE OF THE UNION

**Italian Dressmakers**  
Local No. 10, L. C. W. U.  
100 West 16th Street  
ELECTIVE BOARD MEETS FIRST THURSDAY AT THE OFFICE OF THE UNION

**WHITE GOODS WORKERS' UNION**  
Local No. 10, L. C. W. U.  
100 West 16th Street  
ELECTIVE BOARD MEETS FIRST THURSDAY AT THE OFFICE OF THE UNION

**BONNAZ EMBROIDERERS**  
Local No. 10, L. C. W. U.  
100 West 16th Street  
ELECTIVE BOARD MEETS FIRST THURSDAY AT THE OFFICE OF THE UNION

**AMALGAMATED CLOTHING WORKERS OF AMERICA**  
Local No. 10, L. C. W. U.  
100 West 16th Street  
ELECTIVE BOARD MEETS FIRST THURSDAY AT THE OFFICE OF THE UNION

## THE NATION

Organized on

work & first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

of the first issue

Part of the New York City Union Directory. (Courtesy *The New Leader*, N. Y.)

<sup>1</sup> Cf. the discussion of trade association activities above.

<sup>2</sup> Cf. Sidney Howard, *The Labor Spy* (Republic Publishing Company, 1924).

prominent union leaders. Elaborate systems of espionage have been worked out to follow undesired workmen from place to place, even to detect their assumed names and then obtain their dismissal.

All this may seem to be rather collective warfare than collective bargaining. Full collective bargaining implies more peaceful dealings between such organizations on both sides. In many instances, this state of affairs prevails to a very high degree. In the New York printing trades, for example, organizations of skilled craftsmen and of their employers, the master printers, meet regularly in certain well equipped offices to discuss mutual problems in a spirit which is usually amicable and fair. It is the ideal of many economic reformers to bring about such conditions throughout industry, to have the employers everywhere recognize the right of men to organize, then to organize themselves into associations not with a view of combating the workers but of coöperating with them for the interests of both. A society so organized would be a system of elaborately interrelated groups and subgroups, each rather flexible, no doubt prevailingly selfish, but willing to compromise in a reasonable way. Such a system would not be a solution of all of society's economic problems. The world would still be full of constant rivalry, misunderstanding, and dispute over new issues constantly arising. One cannot expect that mere membership in such a system would make a unit unselfish or perfectly reasonable, but it would at least provide a ready mechanism for the adjustment of disputes. It would insure that grievances instead of rankling in silence or being misrepresented, should be brought into the daylight. It would provide that the clash of interests should be clearly recognized, and this is a step toward adjusting them equitably.

#### 4. *Forced Bargaining*

Unfortunately, we are at present far from even this degree of orderly adjustment of disputes. Full collective bargaining is in existence only in a very small minority of industrial units and even there the mechanism of operation is not thoroughly worked out. In some parts of the United States, for example the West Virginia coal mines, even the right of workers to organize into unions is not fully recognized. So that at present, union organization

exists in various industries in every degree of development. This naturally makes the situation chaotic and difficult to be dealt with in any comprehensive way by the government or otherwise. But efforts are being made, in the United States, England, France, and Germany, toward the establishment of governmental mechanisms for the purpose of aiding in the settlement of industrial disputes, and considerable progress has been made in the last few years.

In this outside intervention, there are several stages or degrees of development, from mere friendly advice to coercion. At times, the leaders of opposing forces in a particular dispute will voluntarily call for a mediator; or the governor or mayor of the locality may offer such assistance, to be taken or rejected. The usual procedure is for each of the parties to select some man of established public reputation for fair-mindedness and general ability. Presumably he is to be disinterested but, of course, the tendency is to choose some one who is known to be favorably disposed to one's



A picket line at the entrance to a West Virginia coal mine. Union strikers are endeavoring to persuade nonunion strike-breakers not to work. (Courtesy McAllister Coleman)

own side. These two men come together and choose a third, and the three men in council decide the question. Similar expedients have, of course, been tried times without number in the arbitration of international disputes, and the same difficulties apply in both cases. Where the matter is entirely voluntary, an organization will not submit to outside adjustment unless it feels that there is no other way. If it feels powerful enough to win by strike action or other means of force, it will prefer these in the great majority of cases. Therefore, in both international and industrial questions, the issues submitted to such tribunals are usually the minor ones. Even after the decision is given there is no guarantee that it will be accepted by both parties or carried out.

In the adjustment of any industrial dispute, it has been said, there must be three phases, the legislative, the judicial, and the executive. The agreement upon the decision must be reached. Later disputes upon the meaning of that decision and its application to particular cases must be settled and finally the decision of the authorities must be carried out in practice. Naturally, a mere informal appeal to outside mediation will be weak, especially in the second and third phases.

In the effort to increase the efficiency of impartial settlements, it has been suggested that we do one or both of two things—to create regular standing agencies for settlement and to endow them with authority. Obviously there are many degrees of such development. It can be made compulsory to submit the dispute to a tribunal while the acceptance of the decision remains optional. This has at least the advantage of bringing the dispute into the open. It can be made compulsory to submit the question and to accept the award while the execution of the matter is unsupervised.

A few attempts have been made, notably in Australia and in Kansas, to enforce arbitration—both the submission and the acceptance of the decision. The Kansas Industrial Court was such an attempt. Although much was expected of it, the results were no more successful than in most other attempts at compulsory arbitration. The constituted authorities naturally feared opposition by the workers and so made their decisions at least fair to the workers in most of the disputes. So that, as it turned out, the chief objection came from the employers; but the unions too were dissatisfied; they objected to the coercion on principle, and found no contentment in the decisions. There was constant trouble from the passage of the act until its virtual emasculation by court interpretation. To all intents and purposes the law is now a dead letter.

What has occurred in Russia under the Soviet régime is still difficult to find out with accuracy. Apparently compulsory arbitration is the prevalent system there and is backed up by all the military forces of the government. If the failure of attempts to resist this authority is the measure, the system has been a success. But the question is considerably doubtful if we choose as a measure efficiency of production and genuine sat-



isfaction among the workers as contrasted with unwilling submission. Certainly it appears that in recent years the Russian government has tended to relax the severity and absolutism of its industrial decisions, to grant steadily more individual initiative to employers and workers; certainly to peasants, since the peasant is always the most difficult type of laborer to coerce.

### 5. *Obstacles to Forced Bargaining*

There are serious obstacles to compulsory arbitration. It is next to impossible to force workers at the points of bayonets to carry on occupations they do not wish to carry on, and only under the most extreme despotism, powerfully organized, can they be even momentarily successful. Furthermore, public opinion is far from convinced that the right is on the side of the coercing government. In western countries, especially, the tradition of individual liberty is an obstacle to the too drastic enforcement of unwelcome laws. Ordinarily both governments and tribunals are unable to prove to the satisfaction of any one the thorough justice and scientific character of industrial decisions. The settlement of a dispute



about wages, for example, involves, in the first place, the collection of an enormous amount of information, of detailed statistics. If street-car conductors demand an increase in wages and assert that the company is well able to pay it, that raises many intricate issues. For a scientific decision, the tribunal should have not only

full data as to the present wages of the men, but data as to the ability of the company to pay more, which depends upon its profits as compared with the profits of other similar companies, and upon the prosperity of business generally. It should have data also upon the real value of the wages now received, that is to say upon its relation to the cost of living. If living costs have materially increased while wages have remained the same, that is an important point.

But the gathering of statistics on these points is a slow and intricate task, so that figures once gained may be out of date by the time they are ready. Figures should be available also upon the amount of wages which men are getting in similar occupations in the same and other industries, to determine whether the conductors are getting relatively too much or too little. Still deeper questions are involved. How much are they entitled to; what share in the collective income of the company, of the industry as a whole, and of the nation? If the criterion be social service or skill, how is one to compare street-car conductors with other workers? The easiest way, of course, is to accept the status quo as a basis. If street-car conductors have uniformly been getting so many cents an hour less than motormen, the practice is to continue the same proportion in wage adjustments up and down; but this of course evades the question since the previous rate may have been unfair.

In other words, as soon as we attempt to take industrial disputes out of the realm of brute struggle for existence, we assume the task of devising rational standards of determining how the social income should justly be apportioned. We assume the responsibility of handling the management of industry in a genuinely scientific way, which means in the first place the getting of relevant information. In practice it is quite impossible to obtain thorough information about the question by the time it is wanted. Not enough permanent statistical organizations are at work collecting facts, although these organizations are on the increase and are doing useful work. But the chief difficulty arises always from such fundamental questions of merit and comparative standards of living as have been mentioned.

Far wider questions also complicate the task of adjusting industrial disputes. The right of any industry as a whole to a

certain share of the social income is debatable. Shall it be allowed to raise its prices or its rates in order to secure a wage increase for its employees? How shall the various industries be fitted in and made to coöperate and to share in expense and reward? Again, there is the consuming public to be considered. Employer and employee in any given dispute are only two of the factors involved. In most cases at present, the consuming public is helpless and silent. Often consumers are regarded by the parties to this dispute as the legitimate sources of greater profits for the employers and greater wages for the workers, that being the easiest way to settle the affair.

#### 6. *Progress Toward the Adjustment of the Conflict*

Notwithstanding all these difficulties, attempts are being made to perfect machinery of adjustment. Labor boards, national industrial councils, and other tribunals are being organized with greater or less powers of enforcement. The National Industrial Council, for example, has been organized to obtain joint action between representative organizations of employers and workers, to prevent and adjust industrial disputes, and to serve as official consultation authority to the government upon industrial relations. The English plan known as the Whitley Scheme provides for an elaborate mechanism of adjustment within each industry. There is proposed a complete hierarchy of councils from the small Works Committee which represents the management and workers in a particular plant up through the District Council, representing both union and employer in a district, to the Joint Standing Industrial Councils of the nation. These committees, it is hoped, will be able to deal with questions of hours, wages, and conditions as they arise, to provide security and continuity of earnings, and of employment, and to provide for technical education, training, and industrial research. They are to consider proposed legislation affecting the industry.

In spite of the general failure of social adjustment of these matters up to the present, it appears that there is no road open except forward—that is toward perfecting the only available mechanism. The only other way is to move backward toward dependence upon irrational combat; and even where this is desirable, the steady trend of social forces seems to be toward

rational collective adjustment. It is doubtless impossible and undesirable to attempt thorough and absolute compulsory arbitration at the present time; but there is no reason why standing bureaus cannot be created to obtain relevant information upon industrial disputes. This requires, it is true, considerable expenditure of public funds, but the value of the information may be expected to more than compensate for this expenditure. There is no obstacle, other than a general fear of all governmental activity, to the creation of standing councils which shall have power if not to enforce decisions, at least to bring disputes into public view and to deal with them in the most rational possible way. We cannot wait for the settlement of such abstruse moral issues as the relative rights and merits of various members of society. The wheels of industry must turn and a certain amount of disposition to compromise must be assumed. In time experience and practice may work out tested precedents and policies for certain settlement of typical maladjustments. The case is quite analogous to that of government in general. No system of parliaments or congresses will succeed in settling in advance all disputes and problems, but let a flexible and efficient mechanism be established and disputes can be taken out of the realm of force as they arise and given over to the control of intelligence, moderation, and common sense.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What is meant by the term "collective bargaining"? Upon what basis does it rest?
2. What groups are using it?
3. Outline the method of collective bargaining.
4. Do you see any advantages for society from a wider application of collective bargaining in the relations between labor and capital?
5. Why are methods of compulsory bargaining unpopular and relatively unsuccessful in this country?



## CHAPTER 32

### THE COÖPERATIVE MOVEMENT

#### 1. *Meaning and Significance of Coöperation*

The term coöperation itself means, of course, "working together." It has its significance from the highly social nature of our present institutions and arrangements. We have to work together as things are in our society. Working together, however, may be voluntary or it may be involuntary. In a certain sense most of our activities at the present time are involuntary. That is to say, there are certain pressures upon each individual in the dustrial system, such as fear of want or such other more direct pressures as the subjection to an employer or his representative, the foreman. These pressures practically force certain particular activities upon the individual. Coöperation intends to supplant all these forced activities by voluntary ones, ones in which men engage with enthusiasm and in a spirit of friendliness. There are a number of concrete molds into which the general impulse toward the coöperative movement has run and it consequently has several shapes for analysis, as we shall later see. But it is this voluntary, democratic impulse that lies behind them all and gives the coöperative movement as a whole meaning and significance.

To a great many people coöperation seems to be a sufficient social philosophy. In it they seem to see sufficient hope for the regeneration of the social order and so it deserves our critical attention. Coöperation may, as we shall see, apply to both the



(Courtesy Coöperative  
League of America)

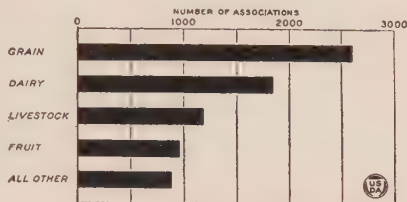
activities of producing and those of using goods. Its essence, however, whether in producing or in consuming, lies in the free affiliation of individuals in local groups with like interests.

It is true to say that the word coöperation has itself within the past few years taken on a new significance to many people in the United States. It means more than simply working together. It means concretely an instrument which may be used to lighten the burden of high prices and low wages through the elimination of the middleman and his profit and through the management of the affairs of business enterprise by the individuals to whom the services are rendered. Thus, it eliminates not only unnecessary costs but also profits. Its distinguishing feature is that it exists for the common good of all its members. All property that is acquired becomes the common property of all the members. Every economy that is effected in manufacture or in distribution and every advance in efficiency benefits every member instead of going as higher profits to some one person or class. The local groups who are immediately interested in coöperation have found it necessary, however, to have wider affiliations and so there has been a development of wholesale coöperatives. This expansion has taken place to meet the demands of modern large-scale industrial life. Market areas of today are wide. The range of goods used by individuals is great. And coöperation, to be successful, has to be as complex as the functions it must perform in order to meet the demands of the social group.

In general, the movement has had far greater success abroad than it has had in the United States. This may be said to be due in part at least to the nature of the civilization there. In Europe there is a more settled way of life. There is less shifting of population. The United States has long been the land of opportunity in which life is more or less an adventure. At least we inherit that tradition. And it is true that the pressures here have not been so great and the standard of living has been consistently higher. No one has cared particularly to protect his status because he hoped that it might change overnight; and often, indeed, it did. The commonest fairy story in the United States is that of the farmer lad who rises to be the great captain of industry.

This seems sufficient to account for the partial failure of coöperation in the United States. And the fact that in Europe there

has been more need to obviate private profit because life was lived on closer margins, seems sufficient to account for its success there. But then, too, there has been a rapid increase in efficiency in the whole world of business in the United States and this efficiency has taken the direction of organization on



a large scale; so that no local small group could hope to compete on even terms with great chain stores, for instance, or with department stores or mail-order houses, even though these concerns did maintain wide margins of profit. The co-operatives abroad got off to

Reports received by the Department of Agriculture from farmers' coöperative organizations have been classified according to the kind of enterprises being conducted. It is estimated that there were approximately 12,000 active business organizations at the close of 1923, and that during that year their total volume of business was in excess of \$2,000,000,000. (From U.S. Dept. of Agr. Year Book, 1923)

a better start and grew along with private business so that the wholesale societies in England were able to compete on even terms with private businesses because they were just as large and could make just as many economies of operation.

## 2. Classification of Coöperative Enterprises

Coöperative enterprises have taken a number of different forms which may be classified roughly as follows:

1. Coöperative credit and banking associations.

2. Coöperative associations for production.

- a. Associations of producers to produce raw materials or finished products.

- b. Associations of producers to sell coöperatively either raw materials or finished products.

3. Coöperation for consumption.

These classes may and do overlap in practice. It may be that a credit institution may also function for producers in selling their product or for consumers in buying supplies. The consumers' association may also have banking and insurance departments. It may undertake coöperative production of supplies. Or the

former association may in addition to its primary function as a marketing agency for its members, undertake to supply them with the necessities of home and farm.<sup>1</sup>

Taken the world over, consumers' coöperation is of more importance than any other type so far, though in particular places there have been great developments of coöperative credit societies and of societies for production or for the marketing of some special product, such, for instance, as the citrus fruits of California.

### 3. *The Consumers' Coöperative Movement in the United States*

It is generally acknowledged that the coöperative movement began in 1844 in England when twenty-eight flannel weavers of



Home of the Rochdale Coöperatives. It was here that, in 1843, twenty-eight weavers of Rochdale organized the first modern coöperative. (Courtesy *Locomotive Engineers Journal*)

Rochdale organized the first coöperative association. The United States was one of the first countries to follow the lead of the Rochdale pioneers, as they are called. The first workers' coöperative organization in this country was probably established in Boston in 1844. Out of this club grew the powerful New England Protective Union which flourished for a while but was disrupted by internal quarrels and finally superseded by a society called the American Protective Union. This society established, before it failed, some seven hundred stores in different parts of New England.

During the early seventies in the United States, the Patrons of Husbandry, a farmers' order, established a number of coöpera-

<sup>1</sup> Florence E. Parker, *Consumers' Coöperative Societies in the United States in 1920*. U. S. Bureau of Labor Statistics, Bull. No. 313.



tive stores, some of which still exist. In 1874 a purely coöperative organization, the Sovereigns of Industry, was established. This association opened stores all through the North Atlantic states but failed in 1879 through poor business management.<sup>1</sup> Later on, the Farmers' Educational Coöperative Union spread from Texas, where it was organized in 1902, into nearly every state. It is particularly strong still in Kansas where there are at the present time some seven hundred and fifty coöperative societies conducting retail stores.

The Farmers' State Exchange at Omaha, Nebraska, is a single wholesale house doing a business of three million dollars a year and dealing in all kinds of produce. Kansas and Nebraska may now be said to be the greatest coöperative states in the union.<sup>2</sup> In Kansas there are three hundred societies which operate retail stores and also conduct exchanges for the sale of hay, coal, fertilizer, seeds, and farm machinery, and for the marketing of produce. There are also in Kansas many coöperative grain dealers. Several societies own their own flour mills. The total business of the six hundred societies of the Kansas Union in the year 1919 amounted to two hundred millions of dollars. Iowa has about three hundred societies operating retail stores. Missouri and Oklahoma have one hundred distributors' societies each, and rapid development is reported to be taking place in all the states of the Middle West; and this development is particularly rapid in the northwestern states, Wisconsin, Minnesota, the Dakotas, and Montana.

This will perhaps give some idea of the extent to which coöperation has developed in the United States, though it is but a partial description. Many consumers' coöperatives are in existence at the present time in every state and many of them are in the most flourishing condition possible. Perhaps it will make the understanding of the actual operation of a coöperative society more vivid if some of the activities of a going concern are described. The following description of a typical retail project is adapted from a pamphlet called *Consumers' Societies in New York State*, published by the Consumers' League of New York, 1922:

At the corner of Court and Schuyler Streets in Utica stands a grocery

<sup>1</sup> *Op. cit.*, p. 2.

<sup>2</sup> James P. Warbasse, *The Coöperative Consumers' Movement in the United States*, 1920.

store which is different from an ordinary store. It is different because it is a coöperative store and it belongs to those who buy as well as to those who serve. There is no need for the purchaser to be on guard lest the bargain be to his disadvantage, for he is dealing with friendly clerks who are there to help him find what he wants, not to sell him something he cannot use. In this store the purchaser can find all the articles carried by a first-class grocer, canned goods, green goods, dairy products and, in addition, a complete supply of baked goods, baked by the coöperative society itself.

The bakery is to be found behind the grocery. Large high windows throw a flood of light into the mixing room. The oven is of a modern type, large, easily controlled and economical. Five men work at the baking and a boy wraps bread in waxed paper with a mechanical device which automatically folds and seals. The three delivery wagons bear the coöperative motto, "Each for All, and All for Each." They are used in the morning for the delivery of baked goods and in the afternoon for the delivery of groceries. It keeps three boys busy all day covering the territory between the coöperators' homes. The delivery system is essential because the membership is scattered through the entire city.

There are fourteen employees in the grocery and bakery. Hitherto they have received wages higher than those generally prevailing throughout the city for the same kind of work, but recently on their own initiative they voted themselves a ten per cent decrease. In a coöperative all the members may know the financial status of the business and the employees found that, due to the diminishing margin of profit, the business could not support such a high scale of wages. Their wage cut followed because as members of the coöperative they were interested not only in their own wages but in the good of the society as a whole.

The Utica Coöperative Society was organized in 1915 by a group of Germans. Half a dozen nationalities are now represented although Americans predominate. Although they had only ninety-two members and \$1250 to start, they bought out a private store and began coöperative business. Their bakery was originally in the cellar under the store. The former owner was employed as manager. For three or four years they experienced many difficulties. Within two years two managers proved inefficient and had to be replaced. Only the tenacious loyalty of a few kept the society alive. But they had the foresight and determination to fight through those lean years.

Now for five years they have had the same manager. He insists upon scrupulous bookkeeping methods, careful buying, strict regard for the needs and desires of the membership and exceptional precautions against waste and leakage. The president, a man having a private business of his own, has an idealism almost religious in quality. These two men coöperate closely on matters of policy and provide much of the leadership which has brought success.

The membership is now 380. The capital stock has increased from \$1250 to \$27,594. The business in 1921 amounted to \$105,598, forty per cent of which was done by the bakery. Since 1915 the rebates to members

on patronage have totaled \$8207, fluctuating from nothing at all in some years to eight per cent and ten per cent in other years. During this period the lump sum saved to purchasers, including rebates, the earnings on stock shares, and reserve fund, amounted to \$12,642. This sum would have gone into the pockets of private storekeepers except for the coöperative store.

The Utica Society has succeeded because it has met the prime requirements for effective coöperation. The greater part of the membership was loyal during critical times when the easy way would have been to withdraw and trade at chain stores. The management worked unceasingly to put the business on an economical basis. Finally they won out because they put Service over Profit and carried out that rule in the most practical and businesslike way they could find.

Another successful coöperative operation has been the enterprise called Our Cafeteria in New York City, which is described as follows:

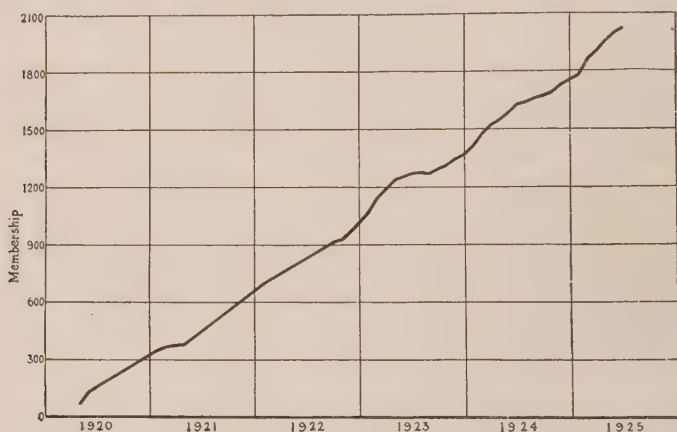
If you should drop in for lunch at any of the three branches of Our Coöperative Cafeteria in New York City the first thing that would strike you would be the friendly spirit of those back of the serving tables. Before you paid your check you would observe further that the food had a variety and flavor not found in the ordinary restaurant. If you were discerning you would detect that a complex machinery was at work which had nearly escaped you because of its smooth operation.

That genial spirit which infects the whole place and those subtle things which appeal to your eye and palate explain the success of the cafeteria. But there are some underlying causes for these things that we must get hold of and to do that we must go back to the year 1919. In October of that year a private cafeteria was started by two women with a record of successful cafeteria experience behind them. The experiment proved successful and the following April a momentous step was taken. It was proposed that the persons who ate there become the owners. A coöperative society was formed and in two weeks shares were sold to the value of two thousand dollars. The new owners took over the cafeteria and the former owners became their hired employees. This was the beginning of Our Coöperative Cafeteria.

The cafeteria had from the outset advantages which are gained by many coöperatives only after bitter and costly experience. They had skillful and experienced management to which they immediately gave over all technical control, holding them responsible through an active Board of Directors and an accounting system devised by experts. The management justified the confidence of the shareholders. On April 1, 1921, after one year of operation, they had outgrown the first plant, and a new branch had been running for two months. There were in all 379 members. The year's business had been \$96,000 of which \$6000 were net earnings. The stockholders had received six per cent on their invest-

ment, a reserve fund had been laid aside, and every month the member-patrons had received rebates on the food eaten of from six per cent to sixteen per cent. At the end of the second year the third branch larger than either of the others, located in the Wall Street business section had been in operation for three months. The membership of the society had increased to 750. The business for the year had been \$190,000 and the net earnings were \$12,000.

The cafeteria now employs sixty-eight workers, most of whom are shareholders and vote as such in membership meetings. The worker receives the same food as the patrons, served at the same counter.



Growth of membership in Our Cafeteria. (Data supplied by Our Cafeteria, N. Y. City)

Against all restaurant traditions the worker is served before the meal so that she may have the best there is and have it before she is too tired to eat it. The minimum wage is higher than the customary rate for restaurant workers in New York. The forty-eight-hour week is the standard, although as yet some of the help work over that time. Overtime is one thing that the management has not yet been able wholly to eliminate.

It has been found that the policy-determining function of the stockholders and Board of Directors cannot operate independently of the plans of the management. The two in a business organization must be closely interrelated. The stockholders have not tried to supervise the details of the business, as has sometimes been done to the disaster of coöperatives. The general manager instead has gone to the Board of Directors and sits there practically as a full member. As a result the policy function of the Board and the management function are closely linked together as they must be in a business that is to be permanent.

The stockholders are not idle, however. Through their committees, they have amended the by-laws. They have recently called a general



meeting for the consideration of labor policy, and they publish monthly a little paper known as "The Coöperative Crier." The average attendance at the stockholders' monthly meeting is sixty or sixty-five.

To an unusual degree the success of Our Coöperative Cafeteria is bound up with its management, not only because it is technically expert, but because it is thoroughly imbued with the coöperative spirit. Around the first nucleus has grown a staff of intelligent young men and women, usually college-bred, who are devoting all their brains and energy to seeing that this coöperative cafeteria succeeds. They seem to find a peculiar satisfaction in knowing that their efforts will not enrich a few individuals



A coöperatively owned laundry in New York City. (Courtesy Our Cafeteria, N. Y. City)

at the expense of patron and employee alike, but will increase the common welfare of the community itself.

Like other coöperatives, the cafeteria has found the need for expert and trained workers in place of the hard-pressed volunteer. Much of the work of education and cooperation organization is carried on by trained members of the staff. This interest of the paid employees in things other than mere technical efficiency contributes much to that friendly spirit which makes Our Coöperative Cafeteria unique among the restaurants of New York.

Other types of coöperation are described by Miss Parker as follows:

#### *The Coöperative Boarding and Rooming House*

This society, composed of unmarried men, took over an old hotel. The society is incorporated under the regular corporation law because at

the time of formation of the society there was no coöperative law in the State. Shares are \$5.00 each and are non-interest-bearing. The society has about 4000 stockholders. The business is operated at as near cost as possible but patrons who are not members are charged 25c. more per week than are the members. Any surplus accruing is divided among the stockholders. At the time the society was visited it was serving about 120 persons per day, though the manager stated that when the shipyards were in operation as many as three or four hundred were served.

### *The Coöperative Housing Association*

This association was organized in 1918 and began operations in 1919. It was formed on the one-man one-vote basis. Each member contributed \$500 toward a non-interest-bearing sinking fund of \$8000, an additional amount of \$12,000 was borrowed from a coöperative credit union, and the remainder of the amount needed for building secured from a trust company in exchange for a \$25,000 mortgage.

The society has built two apartment houses containing sixteen 5-room apartments each, which the members rent for from \$24 to \$27 per month, according to the size of the rooms. This charge pays taxes, running expenses, upkeep and interest on the mortgage. No dividend will be returned to tenants; any surplus will be used to pay off the mortgage.

The apartments are light and airy, with large windows, and consist of hall, living room, dining room, two bedrooms, and a bath.

The society has purchased a third apartment house already constructed.<sup>1</sup>

Actual coöperative housing has not had a development in the United States, however, that is at all comparable with its development in many countries abroad. It is true that in New York City alone there are well over a hundred million dollars invested in tenant-owned apartments. But most of them were promoted and sold by private concerns such as the Queensboro Corporation that exploited the Jackson Heights Garden Apartments in New York City. Such exploitation defeats the fundamental aim of coöperation, which is, of course, escape from the profit system.

In Europe the system is very ancient. It developed many times in the walled towns, of which Grenoble was one, as a part of the medieval system. In France, indeed, there are old records of coöperative housing in such widely scattered areas as Savoy, Paris, Normandy, Chambéry, Toulouse, and Nice. In England,

<sup>1</sup> Florence E. Parker, *Consumers' Coöperative Societies in the United States in 1920*.

where other forms of coöperation are so far advanced, it would be expected that housing too would be affected. And, indeed, such societies are very common, there being upward of 1500 of them in active operation with projects more or less great. To cite but one or two other examples, the American consul at Christiania, Norway, reports that about twenty-five per cent of the old houses and practically all new apartment and office construction is coöperative. In Holland there are more than 1400 such societies. And in Hamburg, Germany, the Coöperative Consumers' Society, with 130,000 members, owns fifty-four apartments besides its 275 stores and many of the factories that make their goods. Many other illustrations might be cited but perhaps sufficient has been said to show the real importance of the movement.

It might be well to summarize the characteristics of the consumers' movement in the United States, as follows:

1. *Unrestricted membership, with capital shares of low denomination which may be paid for in installments.* This is an important feature. Since the coöperative movement is above all a movement of the working classes, it is essential that the financial undertaking be made easy and within the workingman's needs.

2. *Limitation of the number of shares to be held by any one member.* Members of means are not excluded, but in order that democracy may prevail, it is well that there should be no wide inequality in the members' financial standing in the society.

3. *Democracy in government, with officers elected by and responsible to the members, and each member entitled to one vote only, irrespective of the number of shares he holds.* This feature immediately eliminates any tendency toward control of the society by the more well-to-do members, as in the stock company.

4. *Sale of goods at prevailing market prices.* It is the policy of coöperative societies to sell only pure goods and as far as possible only goods produced under favorable working conditions. For this reason "Union Label" goods are in demand by coöperative societies, since the label is a guaranty of production under fair wage and working conditions. Prevailing market prices are charged, for two reasons: Under the "cost-plus system"—sale at cost, plus a small percentage estimated as sufficient to cover expense of management, handling, etc.—it is next to impossible to foretell accurately what the expense will be, and the slightest

miscalculation leads to the failure of the store, since there is in the very nature of the plan no reserve to fall back on. Again, price cutting at once attracts the attention and arouses the hostility of the private dealer; it is also unnecessary since the purpose of price cutting can be accomplished through the return of the patronage dividend.

5. *Cash sales to avoid the loss attendant upon the extension of credit and to enable the society to make the best use of its capital.*



A battery of ovens in a Finnish coöperative bakery, Brooklyn, New York.  
(Courtesy Finnish Coöperative Trading Association, Inc.)

6. *Return of dividend to each member, not on the stock held, but in proportion to the amount of business he has done with the store.* The dividend is the member's share of the savings of "profits," that is, of the sum remaining after the deduction from the trading surplus of the amounts to be set aside for educational purposes, reserve, and depreciation fund. The dividend is computed not upon the share capital but upon the total sales, and is distributed in accordance with the amount purchased by each member. It is evident that the member's patronage, not the money he has invested in the store, determines the amount he receives in dividend. This feature is peculiar to the coöperative movement. Thus the member whose trade at the store has amounted to \$100 during the quarter would receive on a 6 per cent dividend \$6.



#### 4. *Producers' Coöperation*<sup>1</sup>

Even the representatives of the coöperative movement pretty generally admit that producers' coöperation has failed in the United States, as indeed, it has done throughout the world. The reason for this seems to be that whenever a group of workers organizes on a purely productive basis their interest tends to become concentrated upon the exploitation of the great mass of consumers, and they therefore come into direct competition with the capitalist producers who are intent upon the same purpose. In an industrial system which is operated for a profit, there would seem to be no reason for affiliation with a *group* of producers; for if an individual happened to be exceptionally able he could separate himself from the rest and do far better individually. The result generally has been that producers' coöperatives, appealing to the same motives as capitalist organizations, have failed to keep the people of greatest ability among their number and so were eliminated by the operation of competition. The general result has been that groups so organized either failed or became distinctly capitalist enterprises; or, if they did not fail, and did not develop a capitalist spirit, they were taken over, one by one, by the consumers' coöperative associations.

The last of the self-governing workshops surviving in Great Britain are being bought out, according to J. P. Warbasse, by the Coöperative Wholesale Association.<sup>2</sup> Many coöperative organizations have been organized in the United States but every one of them has failed. The Workingmen's Protective Union, the Sovereigns of Industry, the Patrons of Husbandry, and the Knights of Labor are all organized coöperative producers' enterprises. Printing societies, iron foundries, cloth mills, glass factories, laundries, clothing factories, and box factories, have all been organized coöperatively and failed.

Another form of coöperation sometimes erroneously called producers' coöperation has, however, been successful. This is the production program carried on by the British wholesale co-

<sup>1</sup> Agricultural marketing associations are not discussed here, sufficient attention having been given to them in Chapter 8. They are, however, the only genuinely successful associations in the production field. The others, devoted to factory organization, have almost uniformly failed.

<sup>2</sup> *Producers' Coöperative Industries*, 1921.

operators who maintain factories for the manufacture of a number of products. They own some famous wheat lands in Canada, many factories, such as soap and jam works, and even operate tea plantations in Ceylon; but this is not true producers' coöperation. The people who work in the factories are merely the employees of the consumers of the goods; and the two should not be confused.

### 5. *Coöperative Credit Associations*

A field in which coöperation has functioned perhaps more successfully than in any other with the exception of consumers' coöperation is that of coöperative credit societies. These societies cannot be discussed here in any detail because of the intricacy of their operations. Such a discussion would lead us into a discussion of the whole field of banking theory which we must avoid. It will perhaps be sufficient to say that they comprise two classes of members, borrowers and lenders, both often merged in the same individual and both treated with equal justice in the distribution of the profits of the society. Each member must hold at least one share of stock in the association and each may hold more, the par value of the shares being so low as to keep out no one otherwise eligible for membership. Regular rates of interest are paid on deposits and are charged on loans. Depositors do not receive high rates of interest on their money and borrowers avoid paying high rates to money lenders.<sup>1</sup> These societies differ from regular commercial banks in four important particulars;

1. They are organized and managed primarily in the interest of borrowers.

2. The par value of the shares is small and may be paid for in weekly or monthly installments of a few cents each.

3. Small loans are preferred to large ones.

4. Other collateral being lacking, good character is occasionally accepted as security for a loan.

The origin of these societies is usually credited to Herman Schulze, a graduate of Leipzig University in Germany and a judge in a provincial court in his native town of Delitzsch in

<sup>1</sup> Edson L. Whitney, *Coöperative Credit Associations in America and Foreign Countries*, Bureau of Labor Statistics, U. S. Dept. of Labor, Bull. No. 314.

Prussian Saxony. He was greatly affected by the deplorable condition of the working class in his province following the famine of 1848 and he originally organized an association for the purpose of buying raw materials at wholesale and selling them to members at cost. Following this he tried to evolve a plan for raising capital for persons without money, or to give them credit safely without security. In 1853 he organized the first coöperative society providing for the creation of a fund by the contribution of members alone. The rest of his life was almost wholly devoted to propaganda in the cause of coöperative credit associations. As a result of this the number of societies rapidly multiplied in Germany.

An adaptation of the Schulze-Delitzsch societies was worked out by Friedrich Wilhelm Raiffeisen, who as burgomaster of Weyerbusch, an inhospitable region of small farms in the Rhineland, had noticed the inability of the half-starved peasants to make a living following the drought of 1846-47. He believed that the suffering of the peasants was largely due to the terrible usury practiced by money lenders, and so he organized a society to sell the peasants bread and cattle at cost. Somewhat later he organized a credit and loan association to loan money to the peasants at reasonable rates of interest. It was in 1862 that he organized at Anhausen a society in which he united the coöperative banking plans of Schulze with his own plan of distribution. His idea has spread rapidly until today societies on the Raiffeisen model have spread throughout Europe, confined largely, however, to rural districts. The first attempt to establish a credit association in the United States was in 1870 when Josiah Quincy and other prominent men of Boston petitioned the legislature of Massachusetts for a general law allowing the incorporation of the coöperative banks on the Schulze-Delitzsch plan then attracting so much attention in Europe. A bill was introduced but failed of passage, but in the meantime, extensive information concerning credit associations was published in various journals and in 1892 the United States Department of Agriculture issued a detailed description of the working of the Schulze and Raiffeisen societies. In 1900 a coöperative people's bank was founded at Levis in the Province of Quebec, Canada. The first credit association in the United States was founded in 1908 at Manchester, New Hampshire, by French-Canadians who had emigrated from Levis, but

since that time the development of such associations has been rather rapid. Two other occurrences are mentioned by Mr. Whitney,<sup>1</sup> which drew attention to the credit coöperative. The first of these was the Report of 1908 of the Country Life Commission, appointed by President Roosevelt, which found a lack of agricultural credit facilities and recommended the adoption of some method of coöperative credit. The second was the report of the National Monetary Commission, which called attention to the superior facilities for obtaining loans enjoyed by farmers abroad. There were many subsequent conferences and commissions, both state and federal, which recommended some kind of action permitting credit associations to be formed, and by 1916 there were eleven states which had passed legislation relative to rural credits and paralleling the Federal Act of 1916. It is impossible here to go further into the details of the formation of these credit associations, simply to say that many associations have been formed in the United States and have been quite as successful as those in Europe. The movement in the United States has differed somewhat from that in Europe. The European movement is almost wholly agricultural, and at least a considerable proportion of the number of credit unions in the United States are urban. For instance, thirteen of the New York societies and twenty-four of the Massachusetts societies are town, city, or community organizations. In Wisconsin, South Carolina, Utah, and Nebraska no organizations so far have been formed under the enabling acts. In Texas two rural credit unions have been organized under the law; neither of them, however, has done any business. In Oregon two credit unions were organized, both located in Portland; neither of them, however, was successful. According to the most recent reports available<sup>2</sup> two associations had been chartered in New Hampshire, two in Rhode Island, 123 in Massachusetts, 84 in New York, and 43 in North Carolina. Besides these, there were a considerable number of unincorporated credit unions in Connecticut and New Jersey in which no legislation had as yet been passed.

The following table will give some notion of the extent to which credit unions have begun to function in the three states where

<sup>1</sup> *Op. cit.*, p. 19.

<sup>2</sup> *Loc. cit.*



they have had their greatest development as well as in the Province of Quebec, which, as will be seen, has had more success with them than any of our states:

Item	Province of Quebec, Dec. 31, 1920	Massa- chusetts Oct. 31 1921	N. Y. Dec. 31 1920	N. C. Dec. 31 1921
Number of credit unions .....	100	81	68	22
Average number of members per society .....	310	398	331	46
Average increase in membership per society during year .....	12	34	90	3
Average number of depositors per society .....	262	.	53	14
Average number of borrowers per society .....	92	150	170	13
Paid in share capital:				
Average per society .....	\$11,991.70	\$26,324.31	\$26,078.21	\$ 848.86
Average per member .....	30.86	66.17	78.85	18.63
Deposits:				
Average per society .....	45,580.53	19,591.02	3,985.43	20,807.18
Average per member .....	146.89	49.24	12.05	45.67
Average per depositor .....	173.72	.....	74.89	151.52
Loans outstanding:				
Average per society .....	51,813.92	40,918.15	28,834.34	3,825.14
Average per member .....	166.99	102.85	87.18	83.98
Average per borrower .....	197.48	272.12	169.09	290.17
Average amount of entrance fees received during year per society .....	66.42	98.84	180.83	.....
Average amount of reserve per society .....	2,526.27	1,734.35	1,097.40	.....
Average year expense per society .....	451.05	763.28	979.84	.....
Average yearly receipts per society .....	152,607.26	78,974.68	85,237.53	.....
Average assets per society .....	63,069.65	49,940.41	32,409.87	4,128.14

Development of credit unions in Quebec, Massachusetts, New York, and North Carolina.

On the whole it would seem that some such movement for coöperative credit is likely to find a congenial atmosphere in the United States and that there will probably be considerable development in this direction in the coming years. The recent agricultural depression and the consequent Intermediate Credits Act, as well as the measures taken by some of the states of the Northwest, notably North Dakota, to relieve the financial situation of the farmers, give adequate reason to believe that once the possible contribution to rural life of credit associations becomes known their development will be very rapid.

## 6. World-Wide Extent of the Coöperative Movement

During the summer of 1923 Chairman Huston Thompson of the Federal Trade Commission and Dr. William Notz, Chief of its Export Trade Division, visited fifteen countries of Europe and personally investigated various coöperative organizations. Interviews with their representatives were supplemented by detailed examinations and investigations of farms, dairies, mills, stores, warehouses, banks, and educational agencies of various coöperative societies. On their return to the United States they

issued a report concerning their investigations, in which it was made clear that they had been very greatly impressed with the importance and magnitude of the coöperative movement abroad. For it appeared that more than 285,000 organizations in all parts of the world were connected with it and that the total membership probably included thirty or forty million persons. And since each individual member represented a family, probably no less



A winding road in a coöperative village "Green Valleys," Denmark. The little five-room cottage and garden, modern in every detail, costs about fifteen dollars a month. The charges decrease each year as the loans are paid off by the Coöperative Society and the interest expense grows less. (Courtesy Coöperative League of America)

than 120,000,000 people were definitely linked up with the movement.<sup>1</sup>

In some of the larger countries of Europe like the United Kingdom, Germany, and France, the consumers' coöperative societies they found rank among the largest producers and distributors of the necessities of life. In England and Germany nearly half of the population is affiliated with the consumers' wholesale and retail societies. In Czechoslovakia they estimated that about eight million people are directly interested in coöperative enterprises. The farmers of Finland owe their present economic pros-

<sup>1</sup> The information that follows is largely based on that report.

perity primarily to coöperation. By establishing coöperative consumers' stores throughout the rural districts, Finnish coöperators have performed a valuable service to the farmers of that country. In that way they have brought city and country life closer together, made accessible to the farmer the things which he needs for his household, and given him new facilities for marketing his crops and for the purchase of new materials for operating his farm.

In the new Baltic states the credit necessary for agricultural development was procured in the main through the agency of local coöperative credit societies. The flourishing butter, cheese, bacon, and egg export trade of Denmark and Holland rests on the farmers' coöperative societies in those countries. The work of Sir Horace Plunkett and of the Rev. T. A. Finlay in Ireland for the uplift of agriculture through coöperative methods have attracted wide attention. The web of coöperative societies which binds together the peasants of Russia proved the important factor which resisted complete economic disintegration in that vast country after the debacle of 1917.

While all classes have shared in the advantages of coöperation in the various countries of Europe, it is mainly the urban wage earners' families and the middle classes generally as well as the population in the agricultural districts which have attached themselves to the coöperative movement.

An idea of the volume of business done by the coöperative consumers' societies may be gained from the money value of the sales by retail societies in seventeen of the leading countries of Europe, which in 1914 amounted to \$761,429,996, while the sales of the wholesale societies in the same countries for the same year amounted to a total of \$312,790,674. Since that year the volume of goods handled by the same organization has increased many times.

As an instance of the success of coöperative agriculture, the work of the coöperative agricultural movement in Ireland may be mentioned, with its total turnover of more than \$500,000,000 from 1889 to 1922, inclusive.

One of the features of the coöperative consumers' societies is the return of a greater part of the profits in the form of dividends to the members in proportion to their purchases. The large

aggregate savings effected in this way may be illustrated by the fact that the net surplus of the retail consumers' societies in the United Kingdom in 1922 amounted to approximately \$70,000,000. As a further example the societies affiliated with the Union of Swiss Consumers' Societies may be cited, which had a net surplus of 14,455,218 francs in 1921, of which 12,510,824 francs were distributed in the form of dividends.

A further feature of the European coöperative system of distribution consists in the successful elimination of unnecessary middlemen's profits through the distribution of goods directly from the producer to the ultimate consumer. Most retail societies are members of a coöperative wholesale and obtain their



The British Coöperative Society, Cape Breton, Nova Scotia, is the largest coöperative for the distribution of general merchandise in North America. The Central Store at Sydney Mines, shown above, is now surpassed in volume of sales by the Glace Bay Store. Other branches are located at Florence, Cranberry, and North Sydney. (Courtesy George Keen, British Canadian Coöperative Society, Nova Scotia)

stock of supplies from the latter. Some retail societies and most wholesale societies manufacture a large part of the goods handled by them. Members of retail societies therefore practically obtain their goods at the cost of production plus a small charge for distribution.

Other outstanding advantages of the coöperative consumers' societies include the promotion of cash buying, the teach-

ing of thrift, the inculcation of democratic business methods, and the dissemination of useful information through illustrated lectures, printed matter, and other means of organized publicity.

The large volume of business done by the consumers' coöpera-



tives makes them a powerful and in some cases the dominant factor in the price market. Although they usually sell as a matter of coöperative policy, at prevailing market prices, they aim to keep prices down to a reasonably low level of profit. This is in accord with their self-interest as purchasers and ultimate consumers.

It is to their interest to follow the market up to a certain point, because they return the additional charge in the form of dividends, and at the same time avoid competition in price with the retailer. If, however, prices get too high, the consumers' coöperatives are likely not to follow the market for the reason that excessive prices will decrease the demand and reduce sales.

In this respect in some countries the policies observed by consumers' coöperative societies and by farmers' coöperative sales societies do not always harmonize. Not infrequently the interests of the one party, being primarily producers, tend toward high prices, whereas the interests of the other party, the consumers, call for lower prices. Conflicts along these lines have caused a number of large retail consumers' coöperative societies to establish milk distributing plants and dairies of their own in order to make themselves independent of milk producers' rings. The nearest approach to a working-together of agricultural producer and agricultural producers' coöperatives has been reached in countries where agricultural commodities are produced for export. Under those conditions it has been found practical for agricultural coöperative societies to form export federations and sell their products to the wholesale importing societies of another country. Thus the Danish central export federations have for many years been regular suppliers of the English Wholesale Coöperative Society; and the German wholesale societies prior to the war imported butter from the coöperative export federations of Finland and Siberia. Considerable progress has also been made in Switzerland in establishing a closer working-together of the consumers' societies and the agricultural coöperative producers' organizations. In Freiburg-in-Baden the local consumers' and the farmers' coöperative societies jointly operate a market where the local consumers can supply themselves with fruit and vegetables.

Successful efforts to harmonize opposing elements have been made in Finland. There the coöperative consumers' societies

of the cities make it a point to teach the rural coöperatives the need of united action for the general welfare of their country. A helpful influence in bringing urban and rural elements together is exercised also by the various central unions and federations of coöperatives in other Baltic states, in Czechoslovakia, Germany, Switzerland, and elsewhere.

#### *7. Recommendations of the Federal Trade Commission*

It was on the basis of the foregoing facts that the Federal Trade Commission was led to make the following recommendations in 1924 concerning coöperation:

The Commission recommends consideration of the following features of the coöperative movement in foreign countries, with a view to their application in the United States, so far as they may be compatible with the economic and social conditions of this country. Due consideration should be given to the fact that coöperative methods which have proved successful elsewhere may not, under conditions as they exist in this country, be wholly adaptable.

1. Farmers' coöperative sales societies for marketing agricultural produce as directly as possible from the farm to the urban household. As an aid to such a system of distribution the establishment of numerous coöperative warehouses and elevators, where produce from the surrounding country is assembled, stored and shipped, is recommended. The joint purchase of farm supplies (seeds, fertilizers, implements, etc.) is carried on successfully by numerous foreign agricultural sales coöperatives. It is believed that the operation of wholesale agricultural purchasing societies covering larger geographical areas, such as states, should be studied and where the demand for them is clear, should be encouraged.

2. The simple, elastic and inexpensive system of rural credit societies of the Raiffeisen deposit and loan type, adapted to local conditions and needs, managed by the farmers themselves, limited to small areas, but with a centralized auditing system and central banks for diverting funds from one section to another as needed. It is believed that a greater development of the coöperative credit system in rural districts would materially promote thrift, self-help and teamwork, draw in considerable unused wealth of the country side and make it available for credit purposes.

3. The distribution of electric power in rural communities through farmers' coöperative societies has proved so advantageous in Europe that a greater development of this means of furnishing light, heat and power to the American farmer is recommended for the consideration of our farmers.

4. It is recommended that the establishing of retail consumers' coöperative societies be promoted in the thickly populated rural districts of the United States.

5. Coöperative distribution of household coal is looked upon in some

of the leading coal-consuming centers of Europe (among them London, Manchester, Edinburgh, Glasgow, Hamburg, Prague) as the best solution found thus far for keeping down the high cost of household fuel. The English Wholesale Coöperative Society handled about two million tons of coal last year which it bought at wholesale prices and transported in its own coal cars from the mines to the coal depots of its retail societies. In this way the distributing cost of coal from the mouth of the mine to the bin of the household consumer was reduced to a minimum. Similarly the distribution of motor fuel through coöperative societies has been carried on with success in a number of foreign countries.

6. The distribution of milk by consumers' coöperative societies in certain large cities of Europe, notably Basel and Belfast, has met with the well-nigh universal approval of the populace. Unreasonable price increases have been prevented thereby, and a supply of milk of good quality and handled along approved sanitary lines has been assured. In both cases mentioned, the coöperative consumers' societies, in addition to procuring a part of their milk supply from farmers' coöperative milk-producing societies, operate dairy farms of their own. The problem of the milk supply of Basel, in particular, has been solved by the joint action of the local consumers' society and the farmers' cooperative dairies under the supervision of the municipal authorities.

7. It is believed that through the agency of coöperative export associations the market for American farm products could be substantially enlarged in foreign countries, just as the farmers of Denmark, Holland, Finland, Czecho-Slovakia and Esthonia have succeeded in developing remunerative oversea markets for their products by coöperative methods.

Attention is called to the Export Trade Act (Webb-Pomerene Law) which may offer advantages for marketing American agricultural product in foreign countries. Under this Act, any association or combination, by contract or otherwise, of two or more persons, partnerships or corporations, may be organized for the sole purpose of engaging in export trade from the United States or any territory thereof to any foreign nation.

Through such an organization they can seek markets for their surplus production and keep overhead expenses down to a minimum.

8. In various foreign countries efforts are being made to bring about a greater degree of decentralization of power and administration in coöperative organizations. A study of the possible drawbacks arising out of overcentralization would, it is believed, open the way for more efficient methods in the field of coöperation.

### 8. *The Significance of Coöperation*

It will be seen that coöperation is a movement of such wide extent and such formidable proportions that it cannot be dismissed as merely a Utopian dream. It is a very potent present force in world affairs. In a sense it harmonizes very well with the

general aspirations of the peoples of the world in their movement toward greater democracy, and greater localization of the control of social functions; for the very fundamental principle of coöperation is that each individual in it shall have an equal say with every other individual concerning the policies proposed and the operations carried on. It would seem impossible to say whether it is likely that coöperation will develop sufficiently so that in the long run consumers will be pretty universally affiliated with coöperative distributing societies: but it does not seem at all unlikely that such a situation might in time come about. If it does, there has to be considered the conflict that might arise between these consumers' organizations and the organizations of producers, whether these were organized on the present capitalistic basis or whether they took a more socialistic turn as they seem to be doing at present with the general movement toward copartnership and the increase in size of the units of industry. This conflict, however, could scarcely engender more difficulties than exist at present in the field of production and distribution of goods and might, by giving each individual in society a voice in both producing and consuming functions, tend to reduce the friction that exists at present.

Comment on the failure of producers' coöperative societies to function successfully as compared with the success of consumers' coöperatives would necessarily seem to take the general direction of explaining it by saying that it was too premature, that voluntary association is a highly civilized procedure and one which is carried out successfully only in highly developed societies in which the institutions are fairly well fixed and the level of intelligence and education high. It would seem that if producers' coöperation is to develop it will go slowly and will probably develop out of the present tentative rearrangements that are being made in the world of production in the direction of allowing the individuals who actually operate industry more and more voice in the management of affairs. It may be that producers' coöperation will be successful yet.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What is the coöperative movement? List the different kinds of coöperation with which you may be familiar and point out the distinguishing features of each.



2. What are the particular features which characterize the Rochdale co-operative movement? In what countries has it been most successful? How do you account for this?
3. What is the present status of consumers' coöperation in this country?
4. What can coöperative credit contribute to better economic life?
5. What can the coöperative movement contribute toward making a generally better adjusted social existence?

## CHAPTER 33

### GOVERNMENT OWNERSHIP

It is a sign of the strides made in recent years toward collectivism that government ownership as a general principle no longer wears the horrifying socialistic aspect that it once wore. People thoroughly convinced of the desirability of retaining capitalism as a general system, and even convinced of the desirability of free

competition on the whole, tolerate the extension of government ownership in some areas of industry. Complete government ownership of the means of production means socialism; this we shall consider in the next section; while government ownership is a principle which can be extended over part but not



A retail store. There are all degrees of belief in government ownership. Some would even have the retailing system operated by public agencies. More advocate ownership only of "key industries," some only of "public" utilities. And there are many who want none of it at all. (Photo Hine)

all of the nation's industry. There is practically no one today who denies the advisability of some government ownership, but there is a very real question as to how far it is desirable to continue extending it. The question involves not only industrial efficiency but much broader social and political issues.

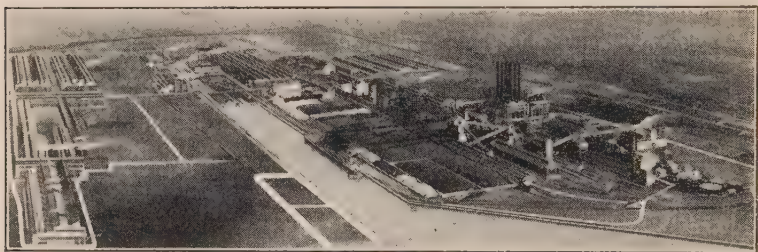
Industry may be highly concentrated and still remain under private direction. But the fields where government ownership seems most practicable are naturally the fields where concentration

has spontaneously developed to the greatest extent and the fields where centralized control is obviously easy. National ownership of army and government equipment is effective because of the high degree of centralized organization in these systems. It is effective also because the controlling interest in the direction of these enterprises is that of the whole nation as a unit rather than any particular group. Likewise the interests of the nation as a whole are peculiarly identified with the postal system. It is an enterprise which necessitates a uniform and wide-spreading centralized organization. At the other extreme are such enterprises as hand-craftsmanship and the fine arts. Here centralized coördination would be impossible and obviously dangerous. These are activities which depend upon the personal factor and in them individual variation must be allowed to have free course. Attempts at governmental regulation of them have been made in the past under the medieval guilds and under strong despotisms. Such regulation has at times produced creditable fruit, but there is a strong demand today that they be unhampered.

The field of retail trading seems at first sight somewhat more capable of centralized management and ownership. It requires no particular development of individual personality. It seems to an indefinite extent capable of reduction to uniform methods and conditions. But in such fields the advocate of individualism makes a strong case in favor of private enterprise. Experience has undoubtedly revealed that the existence of many competing sellers has tended to cut prices to the benefit of the public and to stimulate individual wits in the devising of effective methods. Furthermore, retail selling demands close touch with the public pulse. The demand, not only of the public in general but of particular sections and small neighborhoods, even of individuals, must be felt and anticipated. Stocks of goods and methods of dealing must be adapted very flexibly to peculiar local difficulties. The conduct of such a business must always be tentative, subject to change from time to time. These are characteristics of a field where centralized ownership and operation are not the most practical. However, even these difficulties are being overcome, and there has recently been a rapid development of large control in enterprises whose conduct can readily be reduced to uniform and mechanical opera-

tions, where large-scale buying, production, distribution, are available; in fields where a central executive group can be in touch with conditions throughout the scope of operations. What sorts of enterprises, then, seem to make government ownership and operation at least conceivable?

Large-scale operation and a high degree of centralization have arisen spontaneously in the railroad and coal industries. To a somewhat less degree they exist in such public utilities as street-railway lines, bus lines, and gas and electric services. One might almost arrange the industries of the country in a hierarchy on these bases. There would be, of course, much doubt as to where to classify certain ones: for example, the automobile industry. As



The River Rouge Plant of the Ford Motor Company. This organization, with its plant equipment, is a typical example of the rapid and spontaneous growth under private ownership of an industry which lends itself to large-scale operation. (Courtesy Ford Motor Co.)

we know, it has reached an extraordinary degree of organization in the case of certain companies, like the Ford and General Motors companies. But it also involves retail selling, and in its manufacturing side its history reveals the conspicuous achievements of past private ownership and inventiveness. Street railway lines, electric and telephone services, and other such enterprises, while apparently centralized, yet demand some amount of adaptation to local conditions and are better adapted to municipal ownership than to completely centralized government ownership.

It is upon the coal mines and railroads, therefore, that the discussion of government as apart from municipal ownership and operation has been focused. Here it is possible to have any one of several schemes verging more or less upon collectivism. A railroad,



for instance, may be privately owned by a corporation. It may have its own board of managers and be on the whole almost entirely autonomous, yet it may be subject to periodic inspection and regulation by the government as to its rates and other practices. The public has long become used to such general supervision and rarely protests against it as in any way autocratic. The railroad scandals of half a century ago are still vivid in its memory as examples of the irresponsible abuses that can arise when private enterprise is given an absolutely free hand.

The first step toward governmental regulation is usually the appointment by local or national authorities of a special commission to investigate some specially flagrant abuse, either poor service or unusually high rates. Investigation can be ordered, the courts can compel the firm to open its books, and if fraud or gross mismanagement is found, either criminal procedure or public opinion will compel a temporary adjustment. But the railroads are so vital to the industrial health of the nation that spasmodic oversight is not sufficient. In enterprises of this nature, where the public interest is constantly and vitally concerned, the public has become used to the appointment of permanent commissions such as milk inspection boards and public service commissions.

Then arises the question, How much power shall be given to these boards of regulation? Shall they dictate rates and methods? Here there has been a stubborn battle all along the line between the defenders of free competition and those of collective control. The latter have pointed out the inefficiency and extortion arising from selfish private interests. The individualists have replied with equally convincing examples of municipal or federal corruption and red tape; they have pointed to the history of the development of public utilities and attributed it to the enterprise of individual pioneers. The collectivists have replied that although the creation of these utilities was a matter of pioneering, in their operation now they have become gigantic mechanisms and can henceforth be better conducted socially.

Little by little, through bitter legal battles, the right of municipalities to dictate rates and methods to private concerns has been won. In cases of emergency the government has always the consti-

tutional right to exercise its "police power," to intervene to an almost unlimited extent for the sake of public health and security. During emergencies, then, the government has forcibly intervened and the precedent once established has been continued. We now have the principle thoroughly established that subway, street-car, telephone, and other such rates are susceptible to regulation by appointed public boards.<sup>1</sup>

A board appointed to fix rates for a public utility very soon gets into difficulties. What is a fair or just rate of profits? Statistical investigations<sup>2</sup> have recently demonstrated that there is no such thing as a normal rate of profits for industry as a whole which can be taken as a standard of regulation. Profits vary widely among industries, among firms in the same industry, and from year to year. What would be a fair profit for a given year in a risky industry liable to heavy losses (let us say in the manufacture of clothing novelties) might be an extortionate rate for a stable enterprise such as banking. Even within a given industry, it is very hard to determine what constitutes a fair average rate of profits. Suppose that six per cent is selected as a fair rate for a certain street-car line to earn. Is it fair to restrict to such a per cent the earnings of one company while others in the retail trades and in manufacturing are receiving unlimited profits? The effect of such piecemeal price regulation is often to aggravate rather than to alleviate the trouble. By making one industry an unattractive field for the investment of capital, we deter investors from putting their money there, and our public utility fails to continue progress through lack of funds.

In view of such facts, it is easy to see how a further step toward collectivism may seem advisable. The city may purchase outright the street-car line or build one of its own and operate it by a salaried commission.

The nation may purchase the railroads and operate them. This country, during the war, practiced temporary government ownership of railroads, and the experiment has been much discussed as bearing upon the advisability of such practices in future. Unfortunately, the factors involved there were so complicated and so unusual that it is difficult to take that experiment as a test case

<sup>1</sup> Cf. *The Economic Basis of Public Interest*.

<sup>2</sup> Cf. David Friday, *Profits, Wages, and Prices* (Harcourt, Brace, 1920).

for government ownership in general. In the first place, the success or failure of so vast a national enterprise is not necessarily an indication of the feasibility of smaller municipal undertakings. In the second place, success or failure under abnormal war conditions is not a good criterion. During the war unusual things were demanded of the railroads in the way of transporting goods and troops. Normal business operations were suspended or altered. There was little time to develop an efficient system on so large a scale. On the other hand, it is urged that war conditions produced an unusual degree of social spirit on the part of executives, and that this caused more coöperation and energy than would be likely to obtain under peace conditions. It has been charged in reply, that those interested in the return of the railroads to their own private owners deliberately hampered successful operation and caused discredit to the scheme as a whole.

In view of those controversies, we are still in the dark as to the possible future efficiency of government ownership of railroads. For all practical purposes, however, the question is now an academic one, at least for some years. Public opinion seems definitely set against continued government operation of railroads for the time being. It balances two possible evils and prefers to run the risk of private extortion rather than of governmental graft; of private inefficiency rather than of bureaucratic red-tape.

Government *operation* is a different thing from government *ownership*. Even if the railroads were taken over and managed by a national board, their ownership might be



Railway engineers and firemen favor the Plumb Plan, which would give each man a voice in shaping the policies of the railroads of the United States. (Photo Hine)

left in the hands of the present stockholders. This would involve all the difficulties mentioned as to the returning of a fair rate on invested capital and as to the right of stockholders to a voice in

management. It has therefore been proposed that the government go more deeply into the enterprise and purchase the railroads outright.

Another difficulty has also led to this proposal: that of the labor disputes upon the railroad lines. During and just after the war, railroad employees felt peculiarly dissatisfied with wages and conditions, and imposed demands under threat of strike which would have paralyzed the nation's industry and worked untold damage. The government under President Wilson was therefore forced to concede to their demands the provisions of the Adamson Act.<sup>1</sup> This was successful as an emergency measure but left unsolved the basic questions of the right of railroad employees to a voice in determining their wages and conditions. The right to strike involves different issues in the case of private and of government ownership. The latter case seems more in the nature of rebellion. In the case of the police strike in Boston public opinion was prevailingly against the strikers, since they struck at the city and the public rather than against private employers, and subjected the people to hardship and danger.

This question still stares us in the face with regard to railroad strikes and those in all vital public utilities. A strike there is more than a private squabble; it is a blow at the whole nation.

Yet, we cannot with justice order railroad employees, any more than others, to rest content with conditions which they deem unfair. If the government assumes the responsibility, then, of managing the railroads, it must be prepared to handle labor disputes.

For these two difficulties—profits and labor conditions—a solution has been proposed in the Plumb Plan.<sup>2</sup> This plan intends first to force government purchase of all railroad systems on the basis of capital invested. Naturally, there are many difficulties waiting there concerning the valuation of railroad property, and in the problem of what should be done with the private capital that is excluded from one field of operation. How, moreover, would the funds be provided for the purchase of the railroads? Assum-

<sup>1</sup> For the provisions of this act see S. Perlman, *History of Trade Unionism in the United States*, p. 231 ff.

<sup>2</sup> For an explanation of the plan see Glenn Plumb and G. F. Roylance, *Industrial Democracy* (Huebsch, 1923).



ing, however, that these difficulties were surmounted and that the railroads had been purchased, the Plumb Plan then would provide for their operation by a board of fifteen directors, five representing the public, five the managers, and five the classified employees. That is, the public would have a voice in seeing that the service was efficient and rates not too high; the executives would have a voice in seeing that good methods were followed; and the subordinate employees a voice in securing fair treatment. The surplus earnings, it is proposed to divide between the government and the employees, providing that if the surplus grew beyond a certain percentage of the operating revenues, the rates must be reduced for the benefit of the public. The deficits, if any, would be met by the government from other sources.

It is to be remembered, of course, that the existence of deficits in a public enterprise is not a proof of its failure. It may be socially advisable to run a government enterprise at a loss—for example, the postal system. It may be advisable to give the public the advantage of low rates and to make up the loss from other and easier sources of revenue. Many European localities manage their railways in this fashion.

The question of nationalization of coal mines has also been much agitated in the last few years, especially on the occasion of threatened strikes. A typical scheme for such action is contained in the Sankey Report on the English Coal Mining Industry. This provides for the state purchase of coal royalties and coal mines. Control would be exercised by councils of workers, consumers, and technical experts under the general supervision of a ministry of mines. Details of operation would be supervised by a National Mining Council, by District Mining Councils, and by Local Mining Councils.<sup>1</sup>

Economists differ concerning the extent to which the coal industry is now adaptable for centralized management; but certainly it presents many of the elements of such adaptability. The industry is fairly well concentrated in a few geographical areas; its methods are highly uniform and regular; it involves a vast expenditure of funds for equipment. It is at present under the

<sup>1</sup> For a more complete discussion see Carter Goodrich, *The Frontier of Control* (Harcourt, Brace, 1920). Also Arthur Gleason, *What the Workers Want* (Harcourt, Brace, 1920).

control of a few large companies; and it is vital to industry as a whole. All these observations are more true of anthracite than of bituminous mining but in a more limited degree they apply to bituminous mining as well, though here there is less concentration and less control by a limited number of firms. Labor



The black areas of this map show the main bituminous and lignite coal fields of the United States. The bituminous areas are for the most part in the eastern half of the country.

disputes that threaten the fuel supply of the country and public dissatisfaction with prices have been frequent and serious in the coal industry. On several occasions disastrous strikes have barely been averted and always the situation has been

compromised with only a superficial solution. A recent dispute in Pennsylvania was adjusted by the mediation of the state government after representatives of the national government had tried and failed. The strike was finally called off and the public, with its usual contented optimism, immediately forgot the matter. But this is a perennial difficulty that will arise again and again until a better solution has been discovered. The adjustments are made, in these disputes, with no approach to thorough statistical information about the facts of wages and profits involved. There is no bureau prepared to furnish such information on short notice and no agreement upon the principles that should decide the issue. The solutions are simply compromises between two forces which leave the public none the wiser as to the rights of the case. When other disputes arise, as seems inevitable, the country will be scarcely more able to cope with them.

It is such conditions which have led certain reformers to urge

the nationalization of the mines as a solution. We need not attempt to settle the question but only to realize the urgency of thinking about it. We should also realize as clearly as possible the advantages and difficulties to be expected from either nationalizing or doing nothing, the two extreme alternatives. At present



An exterior view of a Pennsylvania coal mine in the anthracite field.  
(Photo Hine)

we have a more or less chaotic state of affairs with some private regulation and the spasmodic intervention of state authorities some collective bargaining and some refusal to recognize the union. We have some extortion of high rates from the public, no doubt, with the expectation that the public will protest if rates go too far. Likewise employees will protest if their conditions are too bad, but will not be anxious to undergo the hardships of a strike without provocation. Likewise the owners will get what they can, and may not be perfectly efficient, but they cannot go too far either toward inefficiency or extortion without injuring themselves. The public, therefore, occupied with its own affairs and loath to undertake the enormous responsibility, seems inclined to allow matters to muddle along in the old way.

We should realize that nationalization of coal mines, as of railroads, is easier said than done. Extraordinary benefits may result perhaps from it, but the step should not be taken until the country is prepared to assume responsibility on a very large scale. The policy of government ownership and operation implies in the first place the creation of a government mechanism as elaborate

as that at present in existence in the private concerns now in control. It implies the securing and paying of able trained executives. It implies holding out to them inducements of some sort that will persuade them to exercise energy, public spirit, and inventiveness. It implies the devising of some scheme to avoid the persistent danger of all large-scale enterprises, that of falling into routine and red tape.



"Cuttin' a kerf." One of the hardest jobs in a coal mine. (Photo Hine)

Recent experience with the enforcement of prohibition has increased a certain fundamental distrust in the public mind also of the honesty and efficiency of minor public officials, especially if they are poorly paid and in a position to profit dishonestly from their position.

This is not to say that the devising of such a mechanism as a national coal or railroad system is impossible or that it would have to be perfect at the start. It implies only that the magnitude and full implication of proposed plans should be understood in advance.<sup>1</sup>

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Is there a difference between the nationalization of industry and government ownership?
2. Suggest some of the advantages and disadvantages usually attributed to government ownership of industries.
3. What is the Plumb Plan?
4. What is the present trend of government ownership in this country?
5. Make a list of some of the important enterprises which our federal government is operating.

<sup>1</sup> For a further discussion of the advantages and difficulties of regulation see *The Economic Basis of Public Interest*, Chapter 2.



## CHAPTER 34

### SOCIALISM

In discussing collectivism and government ownership we have, by implication, considered many of the fundamental issues involved in socialism. That word is defined in many different ways, and there are countless different brands of theory, all calling themselves **socialism**.

But it is characteristic of practically all of them that they favor an extreme degree of collectivism in economic, social, and political affairs, and that they propose government ownership and operation of the major public utilities at least. What has been said, therefore, of the virtues and defects of any



A "soap-box" orator—this to many uninformed persons is the typical occupation of socialists. (Photo Ewing Galloway)

step toward collectivism applies with especial force to socialism.

Some of its advocates, however, assert that piecemeal introduction of collectivism in particular enterprises is bound to be unsatisfactory; that the values can be obtained and the defects avoided only by a thorough and comprehensive introduction of social ownership and control. It will therefore be worth while for us to examine some of the aspects of a thoroughly socialistic order and some of the most important ways in which the theory has been explained and defended.

The chief principles of socialism may perhaps be reduced to these:

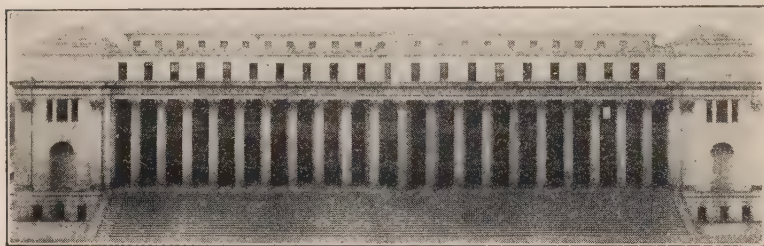
1. The abolition of the rights of private ownership in the means of production (natural resources and capital) with retention of private property in articles of personal use; this implies state ownership of the means of production.

2. The administration of the means of production collectively by the state through a democratic political organization.

3. The abolition of the wage system as it is at present constituted; and the substitution for ours of another scheme of distribution of wealth.<sup>1</sup>

Let us consider briefly the implication of each of these provisions:

State ownership of the means of production would include



Main Post Office building, New York City—part of a great government enterprise. (Photo Hine)

certainly such things as the postal system, the railroads, mines, and telegraphs. It would, in all probability, be extended still further to include not only all public utilities such as street railways and electric and telephone services but also the banking system and the principal manufacturing enterprises. A few extremists, the "communists," have advocated a common ownership of all property, including even furniture, clothing, food, and such articles of personal use, these things to be loaned and issued by the government to private users. But government ownership is not ordinarily so interpreted by socialists. As a rule, they would concede that even certain small handicrafts can be pursued more or less individually.

The bearings of political democracy on this system may be realized if we consider the difference between government ownership under an emperor and government ownership under an

<sup>1</sup> "From each according to his ability, to each according to his need."

elected officialdom. Conceivably, a nation's entire industrial system could be managed from the top, like an army, by a hereditary despot. All the wealth might be his and the workers his slaves. This would be government ownership but not socialism. It is true that socialism generally is thought to imply a large amount of central control. In Russia, indeed, it has been interpreted as consistent with a military dictatorship, but even there the pretext at least of popular control has been preserved and the personal dictatorship described as a temporary measure. Ordinarily, socialists conceive the control of industry as resting in the hands of an elected government responsible to the whole people by universal suffrage. These officials might have any amount of power to secure discipline while they were in office but ultimately their rule would depend upon the consent of the workers.

Abolition of the wage system as well as the lure of private profits places upon the socialist the task of devising a new method for the apportionment of income. Here again a few extremists have advocated absolute equality; that money exchange should be abolished; that all should share alike in the social income, regardless of the amount or quality of the work they do. This, in fact, is the popularly understood meaning of socialism, but it is not an essential, or even a usual teaching of the leaders of the socialists. One may conceive their usual scheme best by imagining the extension of our present Civil Service to cover all industries. There would be no private enterprisers even in retail selling or, perhaps, in the arts and sciences. Every individual would be a servant of the state. All profits would go to the state as a whole and be apportioned among the citizens according to some scheme that seemed likely to result in just distribution.

The history of socialism as a theory and a movement may be divided into two main periods: the idealistic or Utopian period, and the Marxian period. The dividing line between these two types of socialism is the Communist Manifesto of 1848. Leaders in both these types of socialism believed in collective ownership of the means of production but they differed widely in their conception of the steps necessary to bring about a socialistic order.

The earlier socialists, among whom we may mention Robert Owen, a philanthropic factory owner of the early nineteenth

century, were in general mild and benevolent men of altruistic and generally religious motives. He and other Utopians—Saint Simon, Fourier, Cabot, or to go further back, Sir Thomas More—believed in the rule of justice and Christian charity.<sup>1</sup> They believed that socialism was simply another word for the brotherhood of man, and that it would be attained by peaceful means. Philanthropic men of wealth, such as Owen himself, they thought, could take the lead in organizing small communities and share their wealth with the workers, or at least grant them a large amount of control over its management. Industrial society would come in time to consist of members of such small friendly communities living together with common interests, without selfishness, engaged in common enterprises. This, it will be remembered, was during the earlier years of the industrial revolution when the full consequences of the introduction of machinery were as yet not realized: when, for instance, the great scale on which modern operations were to be carried on had not yet been reached, and when the great cities of our time had not been envisaged.

Toward the middle of the century it became increasingly apparent that the introduction of a rule of justice and coöperative industry was not so easy a matter as the Utopians had supposed. Philanthropic factory owners were few, and even had there been more of them, they would have found it hard to bring about a new social order simply by distributing their wealth or organizing small idyllic communities. Vast forces were at work disrupting the old domestic system of manufacture, placing industry on an entirely new basis, and at the same time altering the whole social system. Manufacturing had to be done in large and expensive factories, hiring hundreds or thousands of workers. There was great competition for work, and a large class of unemployed. Old occupations were being destroyed, and the independent craftsmen being wiped out. In addition to this a vast new class of urban workers, almost propertyless, was multiplying in numbers and suffering more misery with each mechanical invention. The owners and operators of the new means of production were growing rich over night, and coming to constitute the dominating power in European nations. The source of their wealth, based upon

<sup>1</sup> Cf. Lewis Mumford, *The Story of Utopias*. Also J. O. Hertzler, *History of Utopian Thought*.



the new production goods—machinery, materials, ships, railways, factories, and the like, set them apart from the older aristocracy whose wealth was based upon land. In a few decades, this newly powerful middle class succeeded in wresting the reins of governmental influence from the landed aristocracy. Many members of the older class entered industry and identified their interests with the middle class. All this was evidently going on in England, France, and Germany, and no one knew where it might lead.

The doctrines of Karl Marx were concerned with an interpretation of these economic and social phenomena. They offered an explanation of the underlying causes of events, a prophecy as to their future outcome and certain advice directed to the workers who were suffering from the new conditions. Primarily, the writings of Marx embodied in the famous "Communist Manifesto" and in his book, *Capital*,<sup>1</sup> were not in the nature of propaganda or exhortation, but a description of what Marx believed to be the inevitable course of history. He wrote, for one thing, that the influence of economic factors in the course of events had been underestimated in the past. Histories had explained events in political terms, by the acts and edicts of kings and queens, of parliaments and armies; conspicuous personalities had been thought to shape the destinies of nations. On the contrary, Marx taught, these conspicuous aspects of history were but its outward manifestations; the underlying causes were economic. The primary force shaping events was the struggle between workers and capitalists—the "class struggle." It was this force which had brought about wars, though they might seem to be religious or patriotic or idealistic to the superficial observer; it was this force which had made and unmade leaders and allowed them to be, for a moment, the figureheads and spokesmen of economic events. History was to be explained, in short, not in terms of conspicuous personalities and events, but in terms of the vast, silent masses blindly moved by a need for attaining a means of livelihood. This theory is known as the materialistic interpretation of history. Historians today are agreed that there is con-

<sup>1</sup> Karl Marx, *Capital* (Charles H. Kerr & Co., Chicago, 1906). See also Marx and Engels, *The Communist Manifesto*, published by the same. Cf. also E. R. A. Seligman, *The Economic Interpretation of History* (Columbia University Press), which S. N. Patten called "the bible of American Socialism."

siderable truth in it; at least the importance of economic factors had certainly been minimized before Marx. But they are far from agreed that the moving forces of history can be reduced entirely to material ones. Human psychology is more complicated and unaccountable than that would imply. People are sometimes moved by religious enthusiasms, by patriotic ideals or by mere blind instinct in directions which run counter to their obvious economic interests.

The second proposition in the Marxian doctrine was the law of the concentration of capital. The rich are becoming richer and the poor poorer. Capitalistic undertakings tend to become larger and larger. Small competitive enterprises tend to disappear and to be replaced by great trusts. This process, said Marx, must inevitably go on until all the wealth of a nation is concentrated in the hands of a few. Here, too, we may remark in passing, history has failed to verify his prediction. Wealth has not concentrated in the hands of a few. In fact, the proportion of millionaires and of markedly wealthy men is probably on the decrease. There are many poor workers, but the working class as a whole is far from being reduced to the abject condition of utter poverty which Marx predicted; and it shows no signs of becoming so.

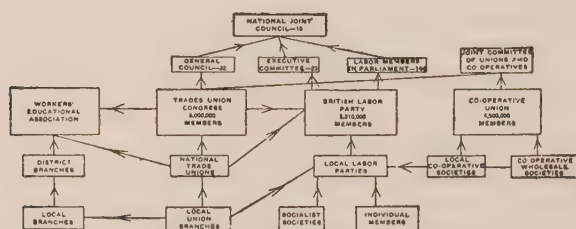
Anticipating this concentration of capital, Marx foresaw that there would be for a time a division of society into two classes, the capitalist and the wage-earning, the *bourgeoisie* and the *proletariat*. These would be bitterly opposed to each other, for their interests were largely antagonistic. To be sure, there was a common ground—both might be interested in the success of an enterprise; but fundamentally the employer stood to profit by paying as little as possible for as much work as he could get out of his workers; the employee to profit by selling his services as dearly and doing as little work as he could. Altruism and benign Christian sentiment were irrelevant and helpless in the face of this irresistible force and a philanthropist who gave away his wealth, or a worker who sought to coöperate with his employer, was merely delaying the march of events. Likewise all legislation and charity directed toward alleviating the condition of the poor or correcting specific troubles was useless. In fact, it was rather harmful to the worker in the long run, since it made him contented with a state of affairs which was fundamentally hopeless and unjust, divided his forces,

and delayed the ultimate reorganization of society. For this reason, Marx was opposed to the growth of trade unionism, especially of the craft type. These unions are opportunistic; they work for specific conditions in the way of increased wages and shorter hours, not towards the social revolution. They tend to divide the workers into exclusive and competing groups. In so far as they succeed, they are prolonging the basic evil.

Marx's advice to the worker, therefore, was to be farsighted, to make immediate sacrifices for the ultimate good of all. First and foremost, let the workers unify, visualize their common enemy, and move against him as a class. Let them educate themselves and be prepared to take over the control of industry when their day came. Let them not be deluded by false promises of concessions from the capitalist, by his charities, parks, free music, and education. The worker had a world to gain and "nothing to lose but his chains." Marx himself believed that the class struggle would involve little actual violence. Unless it were prematurely attempted, there would be no opposition to the workers. If left to themselves, the capitalists would reduce their numbers to a small handful of enormously rich men, all others being drawn into the propertyless masses. There would have been built up an effective and highly integrated industrial machine. What remained for the working class was simply, when this time came, to recognize the fact and take over control, not destroying the industrial machine but utilizing it, under public management, for the social interest, rather than private good.

Other labor leaders of Marx's time and later were impatient with this policy of waiting for the natural developments of the course of history, and, in the desire to hurry the new day, preached violence and terrorism. Especially in Russia there arose a group of terrorists who conducted for years guerrilla warfare against their rulers. Among these were not only followers of Marx but also anarchists. Philosophically, the anarchists were at the opposite pole from the socialists, believing in extreme *individualism* rather than *socialism*. But, for practical purposes, they worked together for a time against the old régime. The Russian Revolution of 1917 obviously was premature from Marx's viewpoint since it occurred before the country had automatically reached the point of concentrated industrialism.

In all countries there have been labor leaders and social reformers who accepted in part Marx's teaching but differed on important points. One may agree that the ultimate social order should be socialistic, yet disagree on Marx's predictions and on the policy of the class war. Socialists who favor gradual legislation to bring about the desired end are known as "reformists" or moderate socialists as contrasted with the orthodox or Marxian.<sup>1</sup> Contrary to the advice of Marx, they will consent to participate in capitalist governments, to accept seats in the legislature, to assist toward unionism, to work for particular relief measures, and even to



THE ORGANIZATION OF THE BRITISH LABOR MOVEMENT  
 LINES CONNECTING TWO BODIES INDICATE THAT ONE IS A CONSTITUENT BODY OF THE OTHER. ARROW HEADS POINT TOWARDS REP.  
 REPRESENTATIVE BODY. SEVERAL IMPORTANT RELATIONSHIPS ARE OMITTED FOR PURPOSES OF SIMPLIFICATION.

This diagram shows the different branches of activity of the British Labor Party, and their interrelation. (From Paul Blanshard's *Outline of the British Labor Movement*, George H. Doran Company, 1924. Used by permission of the author and the publishers)

accept seats in the cabinet of a bourgeois government. In England, a group known as the Fabians, under the leadership of such men as Sidney Webb, Bernard Shaw, and H. G. Wells, advise slow constitutional methods for bringing about reform.<sup>2</sup> In both Germany and America socialist parties have arisen that put up their candidates in a regular way, seek to elect legislatures, and influence legislation in favor of labor. They have usually been more or less divided into a moderate or right wing and a radical or left wing upon the question of the desirability of forceful prosecution of the class war.

In America, it has been the trade-union movement which abstained from politics, preferring to deal with the employer and to

<sup>1</sup> Cf. H. W. Laidler, *Socialism in Thought and Action*.

<sup>2</sup> Cf. various pamphlets of the Fabian Society, especially those called *Fabian Essays*.



attempt to influence both old parties in their favor. In England a labor party has been formed by amalgamation of several different groups who agreed to put aside questions of detail in a common endeavor for conditions more satisfactory to labor. They include the Fabians, most of the trade unions, and many liberal thinkers of various political views. Excluded, and unwilling to coöperate in parliamentary methods, are the Communists who insist upon an irreconcilable class war. The British Labor Party in its recent short tenure of power under the leadership of Ramsay MacDonald showed itself willing, under compulsion, to compromise and coöperate with more conservative groups; to advocate only moderate reform measures. In Germany during the war, the majority of the socialist party cast in their lot with the Imperial government and the military régime. Only a handful of independents led by Liebknecht held out. Since the war, the moderate or conservative socialists have been in power there, although threatened by assaults from the extreme left, and have shown their willingness to compromise with capitalistic interests.

In general, probably a very small minority among labor groups is in favor, today, of the class-war doctrine in its extreme form. Socialism to them is in the nature of an ultimate ideal at most. There are among labor leaders especially in the trade-union movement, those who oppose socialism on principle, believing they stand to profit more from retaining the capitalistic system and insisting upon a substantial share of its earnings. As an ideal, however, socialism is undeniably influential today, not only among laborers themselves but among many members of the capitalist class who would perhaps be unwilling to be described as socialists. It has contributed to public opinion everywhere a certain influence toward the gradual extension of social control over industry.

To repeat what has been said in other connections, we may say that the general advantages to be looked for from pursuit of the socialist ideal are the advantages of coördination and coöperative management in industry: that is, the elimination of duplication, of friction among industrial agencies, and undue profit-making by private enterprisers. Over against this must always be set the extreme difficulty of building up a governmental machine sufficiently vast and well regulated to perform the functions now performed by a multitude of private concerns. We must realize

that inefficiency and selfishness will not be banished from industry by the simple act of turning private enterprisers into government officials; no social revolution can transform human nature overnight. The introduction of socialism would necessitate far-reaching alterations and extensions of our present government. It would not be sufficient merely to hand over to the government as at present constituted such enormous new tasks. The government would have to be made capable of assuming them. Means would have to be devised of inducing capable executives to devote their enthusiasm to the tasks of public management. Inefficiencies which do relatively little harm in the operation of our present governmental functioning, with its small range of tasks, would become serious in a government which attempted to manage completely the nation's industrial life. Thus it is that socialism cannot be considered from the point of view of either economics or politics alone. When government is identified with industry as it would necessarily be under socialism there is necessitated a reorganization of both.

In reducing all apportionment of income to government wage payments on the Civil Service model, socialism raises several serious problems. It must, in the first place, prepare and defend detailed criteria of relative merit for determining what percentage of the social income each type of worker shall receive; it must also consider not only merit but the important question of how to induce good work on the part of its employees. This, if we accept the testimony of observers, has been one of the most serious difficulties in Soviet Russia. Without the lure of profits and having become a part of the Civil Service machine where advancement may be slow with emphasis upon tenure of service rather than brilliance of accomplishment, the individual worker, and especially the better one, is apt to hold back.

Force is, in the long run, an inadequate way of handling this situation. As we have seen in an earlier section, it is one of the leading problems of economic reform to stimulate the voluntary and contented efforts of the worker. The present chaotic way of apportioning income is obviously not in ideal accordance with any moral standard, but at least it gets done in some sort of way and with a considerable amount of satisfaction. Socialism in endeavoring to improve this series of improvised ways of apportionment

takes upon itself a serious and immensely intricate task. No doubt society will be more and more compelled as time goes on to consider this task and to attempt to reward merits and stimulate motives in industry by some rational plan, but it is a task which cannot be accomplished in abstract theory or by a single revolution. It requires the voluntary adherence of united opinion and an experimental working out over a long period of time.

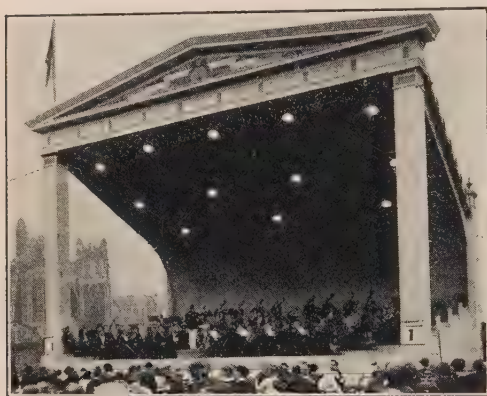
Among other questions of a non-economic sort which socialism



A group of endowed institutions. Columbia University, Union Seminary, and the International House appear in this picture. (Courtesy U.S. Army Air Service)

involves is the conduct of worth-while enterprises which are not productive of material wealth, the luxuries so to speak, of our civilization. At present, art, amusement, the cultivation of enjoyable ways of utilizing leisure, the creation of all the products of intellectual and esthetic culture—all these are left largely to capitalistic patronage in one form or another. Many universities, symphony orchestras, new theaters, art schools, periodicals of the less popular type are supported by private endowments. Individual artists can support themselves only by depending upon the sale of their productions to a limited public which possesses a personal surplus of income and is willing to part with it for goods which are in no sense necessities and yet which represent some of the highest achievements of our time. Under socialism all these

enterprises might be conducted by governmental action and appropriation, but many reformers who approve of socialism on economic grounds are seriously concerned lest it threaten the quality of our culture. If harm were not to result in a socialistic state some means would have to be provided whereby artists and scientists—social scientists among others—pioneers of all sorts,



The New York Symphony orchestra playing at a summer concert—one of the activities most precious to civilization but most likely to be overlooked in the creation of social schemes.

in fact, who might be unacceptable to established officials, would be able to pursue with some freedom the course of their creative work. Government regulation of art and science or very close control of the funds necessary for their support have in the past proved somewhat dangerous. The will and taste of the multitude, or of fanatical and intolerant elements in

the multitude, are apt to prevail. Creation under these conditions is stifled. In trying to abolish the obvious evils of capitalistic control of intellectual activities, and substitute the forms of control that would follow from socialism, we ought to consider whether we are not likely to incur a new set of evils worse than those we now suffer under. Safeguards would have to be built up by the people against their own prejudices and stupidities. Protection would have to be devised against the repression of spontaneous individual development by a crystallized and unprogressive social mechanism.

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. What is socialism? Is it synonymous with collectivism and government ownership?
2. Summarize the tenets of socialism and show how industry would be managed in such a régime.
3. How do you account for the growth of socialistic thought abroad?
4. What are some recent developments in this country? Is the labor group necessarily socialistic?



## CHAPTER 35

### SYNDICALISM, GUILD SOCIALISM, AND THE MODIFICATION OF SCHEMES IN EXPERIENCE

#### 1. *Syndicalism and Guild Socialism*

Socialism as presented in the writings of Karl Marx fails in many ways to present an adequate picture of industry as it has developed since his time. Especially, it fails to show the division of workers and of production itself, into small units, such as the factory and the unions among craft or industrial workers. Marxian socialism tends to treat the working class as a whole without differentiating workers into different types and without considering the organization of production into a delicately interrelated and adjusted series of affiliated units of production. In fact, it has been charged that Marxian socialism regards industry from the standpoint of the consumer rather than of the producer; that it is concerned chiefly with correcting the distribution of wealth, and that it fails to provide an effective plan for the organization of production under modern conditions.

It simply hands over the latter question as a whole to the national and municipal governments, placing upon them the burden of working out a vast and detailed organization capable of taking over factory management. This not only requires the building from the ground up of an entirely new structure but it runs the risk of excessive centralization, the entrusting of so much oversight to a central body that effective supervision of details over a large area could not be exercised. It also runs the risk of creating an autocratic central power without providing for the fair adjustment of conflicting interests among the groups of industry. There is certainly nothing voluntary in the affiliation of each group with the bureaucracy. Yet, unless force is to be depended upon, no provision is made for securing group coöperation.

These difficulties syndicalism and guild socialism claim to avoid. Instead of beginning with a theory and calling for the construction of an elaborate mechanism to carry it out, they begin with existing

social mechanisms and profess not to be much interested in general theories as the Marxians are. Production has already spontaneously organized itself into factories and their affiliations; workers have already organized themselves into unions. Let these units, then, the factory and the union, be taken as the units of industrial management. Let their interrelations be more fully perfected and let them then take over the control of industry. Thus, the interests



The syndicalists would run industry through the autonomy of local or factory groups; thus all the workers in a steel mill would be organized to manage their own affairs. (Photo Hine)

of the producer as well as of the consumer will be protected. Industry will be run by productive units, organized on a factory basis, rather than by consumers organized on a territorial or political basis. Instead of dealing with the working class as an undifferentiated whole, these schemes propose to deal with it as a collection of groups, admittedly non-identical in interest, but capable of reconciling their quarrels through collective deliberation. Since authority finally rests in the

coöperating local groups there can be none of the overcentralization or authoritarian compulsion that seems inevitable under orthodox socialism.

Syndicalism is a somewhat older movement than guild socialism. It dates from the seventies and eighties; guild socialism is a development of the few years immediately preceding the Great War. Since guild socialism is in a way a compromise between syndicalism and state socialism, it will be well to consider syndicalism first, as to its peculiar characteristics and then see how these characteristics have been merged in the guild-socialist scheme.

The word "Syndicalism" is derived from the French word for trade union, and the movement itself is distinctly French in origin.<sup>1</sup> It grew out of internal disputes in the French Socialist Party. A

<sup>1</sup> Cf. Louis Levine, *Syndicalism in France* (Columbia University Press).

considerable group of labor leaders differed with the orthodox Marxians and insisted upon recognition of the trade union as a factor in the labor movement. They opposed, also, the growing tendency among moderate socialists to adopt mild political action, that is to vote, elect government officials, and pass social legislation. The syndicalists, as they came to be called, advocated direct industrial action as a means of carrying on a bitter class struggle. Their characteristic weapons were the ones that were easiest to adopt: the boycott, sabotage, and the strike. Whenever possible the capitalist employer was injured by means which would allow the individual worker to continue on his job earning wages; slow or inferior work was done; company rules were followed out with absurd exactness so as to hamper practical efficiency, and machinery itself was damaged surreptitiously or openly. As these weapons began to come into use, a group of theorists began to dignify these practical schemes into a theory of syndicalism, which has led to the belief that syndicalist tactics were more prevalent and more successful than in reality they ever were.

The technique of organized striking was to be developed as rapidly as possible, according to the theorists, by the development of a class and group consciousness among the workers and by practical experience in carrying on sympathetic strikes. The hoped-for consummation would be a "general strike" in which all workmen would, at one time, in some crucial moment, lay down their tools and refuse to produce until the ownership and control of production was given over to them. In the meantime, union organization was to be perfected along the industrial rather than the craft line. This meant affiliation of the workers in the natural groups of modern industry rather than the obsolete ones of craft distinction. By this means a completely unified and organized group was to confront the owners of industry upon their own field, being all interested in the product made rather than the type of effort expended.

By the general strike it was hoped that labor could inaugurate the new industrial order. What this order was to be was not very clearly outlined in any concrete way, but the chief fear of the syndicalist was that, after the capitalist was out of the way, a bureaucratic state government would follow. Therefore his planning for his future was mainly negative: the securing of

freedom and autonomy for the unions.<sup>1</sup> In this desire for looseness of social organization the syndicalists were at one with the anarchists, and the two groups of radicals were at times able to work together with some harmony, especially since they both agreed on terrorist tactics also. The method of carrying on production is clear enough within the individual factory: ownership and control were to be entirely in the hands of the local union of workers. This is, indeed, the original meaning of "syndicat." But as to the relations between the factories and the unions which controlled them, the syndicalists had little to say, assuming in an idealistic fashion that no serious disputes would arise among brother workers. By far the greater part of the thought and energy of the movement has been devoted to the destructive side, to the demolishing of capitalism.<sup>2</sup>

The general strike, of course, never materialized. Workers were not sufficiently organized or in agreement. The effect of the Great War was to disintegrate labor still further by enforcing patriotism. In Italy, just after the war and under the inspiration of the Russian Revolution, several vigorous attempts were made to force through a syndicalist uprising. Several large factories were seized by groups of workers, the government being at the time powerless or indisposed to prevent them. The attempt to operate these factories, however, was in every case a total failure. As might have been expected, internal discipline was poor and the rebel factories unable to buy and sell, or to fit in at all with the network of modern industry. Soon a counter movement in the shape of the Fascisti suppressed the rebels completely.

In America the movement has met with similar failure. Nearest to the French syndicalists in principle are the Industrial Workers of the World (the "I.W.W."). This organization attained, just before the war, and during its first few months, a considerable membership, especially in the northwestern states.<sup>3</sup> The type

<sup>1</sup> For a typical example of syndicalist pseudo-scientific propaganda see *Industrial Socialism*, by W. D. Haywood and Frank Bohn (Kerr & Co., Chicago).

<sup>2</sup> For a full discussion of the movement see Savage, *Industrial Unionism in the United States* (Ronald, 1922).

<sup>3</sup> Cf. P. F. Brissenden, *History of the I.W.W.* (Columbia University Press).



of men it attracted to membership was mostly the casual floating population of the farms, lumber camps, shipyards, textile and steel mills, railroad construction, and modern transportation industries. Such men were frequently out of work either through personal irresponsibility or through the irregular character of their industries, and drifted about from place to place. Such a group of men was incapable of much solidarity for a sustained coöperative effort. Under the leadership of W. D. Haywood, certain of its representatives drew up a constitution, agreeing in spirit with the principles of French syndicalism. "The Working Class," said its preamble, "and the Employing Class have nothing in common. Between these two classes, a struggle must go on until the workers of the world organize as a class, take possession of the earth and the machinery of production and abolish the wage system." Craft unionism as represented by the American Federation of Labor was to be opposed and "one big union" of all workers substituted. Skilled and unskilled laborers were to fight side by side and forget their differences. Violence and other forms of direct industrial action were to be carried on. Ultimately, not only industry but the political government as well was to be taken over by the workers so organized.

Financially and numerically weak (there are not over 60,000 members at present) undisciplined and harshly repressed by patriotic and conservative groups, the I.W.W. today are a negligible factor in the nation's industry. Their policy has been confused by the mixture of remote, revolutionary ideas, with local protests against real specific grievances. They lack the organization into stable subordinate groups which a successful syndicalist movement necessitated. The vague discontent, in part justified and in part fanatical, failed to communicate itself to the highly paid and contented majority of workmen during and after



Longshoremen—of the type of workers attracted by the philosophy of the I.W.W. (Photo Hine)

the war.<sup>1</sup> As an organization, therefore, their influence is practically dead; but the spirit of industrial unionism and revolution still exists and manifests itself periodically, especially in the at-



Sleeping quarters in a construction camp.

This place is supposed to house fifty sleepers. Such conditions as these lead with deadly precision of consequence to the phenomena of modern unrest.

(Photo Hine)

tempts of radical members to gain control of the American Federation of Labor by "boring from within" as well as by direct opposition to the craft union.

The idea of utilizing the industrial union as an instrument for the control of industry has appealed to many economic theorists who are totally out of sympathy with the destructive side of syndicalism. Convinced, like the syndicalists, of the weaknesses of state so-

cialism, they have sought to work out a scheme for utilizing the stronger elements of both. This in essence is the idea of guild socialism. It proposes the working out of a fully perfected network of industrial unions and their parts from the smallest works committee up to a supreme national board. The guild socialist parts company with the syndicalist in proposing a strong central body to supervise and mediate between the various unions. He proposes also that the particular unions shall not own the means of production outright but only operate them as agents of the state. The state government shall retain the ultimate possession of them, but not attempt to direct the details of management. The scheme calls, of course, for abolition of private capitalism and of the present wage system, but it does not imply

<sup>1</sup> Cf. R. G. Tugwell, "The Casual of the Woods," *Survey*, xlv, 641-42 (July, 1920). Also C. H. Parker, "The I.W.W." and "Toward Understanding Labor Unrest," in *The Casual Laborer* (Harcourt, Brace, 1920).

<sup>2</sup> Cf. G. D. H. Cole, *Guild Socialism* (Stokes, 1920), and Niles Carpenter, *Guild Socialism* (Appleton, 1922).

the class war or the use of direct rather than political action as a means to these ends.

Each guild or industrial union would exercise complete management of all the activities connected with its particular industry, buying, manufacturing, and selling. The distribution of its income among its members would be a matter for decision by the guild itself. One guild might choose the plan of equal rewards regardless of the type of work; another might attempt the apportioning of rewards on a basis of relative skill. Each guild would contribute to the national state a certain tax or rent for the maintenance of common national enterprises.

Supreme authority in industrial matters, according to the proposal, would be exercised by a guild congress, consisting of representatives of all national guilds. Each of these national guilds in turn would consist of all the subdivisions in a particular industry within the nation. It would be the function of the guild congress to adjust questions arising in regard to the relationships of various industries.

In addition to this congress a parliament would exist, similar to the present one; that is it would represent the community on territorial lines. So selected without reference to guilds or occupations, its members would represent the public as consumers rather than as producers. To them would be delegated the supreme authority in political as distinct from economic matters. Should conflicts arise among the established bodies, a joint committee selected from both houses would deal with them. Those matters concerning the people both as producers and as consumers, such as the adjustment of prices, could be settled by such a group, representing both aspects of economic life.

Guild socialism still remains in the form of an academic theory rather than of a practical and influential movement. The obstacles to its progress are those substantially that we have seen operating against both state socialism and syndicalism and in favor of the present capitalistic régime. There is, first and foremost, the contentment of a large proportion of the workers with the present system, because of conservative temperaments, loyalty to capitalism as associated with patriotism, prosperity under capitalist masters, or because of a mixture of all of these. So far, the movement toward industrial organization of workers has

not seriously threatened the older, opportunistic craft lines in any western country. So far, the structure of unionism has not developed sufficient stability or power to give promise of being able to supplant capitalistic managers efficiently in the near future. The energy of unionism is still largely devoted not to transforming the old régime but to exacting concessions from its present rulers. The mutual relations of different industrial groups of workers have not given evidence of great ability to coöperate. For example, the great projected Triple Alliance in England between the coal, railroad, and transport workers quickly collapsed, in a crucial strike, through the refusal of one of its branches to support its allies. It is easy to foresee in a guild congress, representing various industries, some powerful and some weak, serious clashes and exploitation of weaker groups. Adjustment of prices and apportionment of shares in the total national income would be a source of infinite friction.

Once again, however, we must distinguish between the immediate practicability of a plan and its value as an ultimate ideal. The defender of guild socialism would reply to the objections just made that difficulties at least as grave as these confronted the United States Congress at its inception; that with time, patience, and a small amount of social coöperativeness, they would not be at all insuperable. One should also be able, in discussing such a project, to single out specific elements in it without accepting or rejecting it as a whole. If we desire, for example, a genuinely representative government, there is much to be said in favor of a house of congress which shall represent the people in their producing capacity. At present, neither Senate nor House of Representatives, Lords, nor Commons, gives such representation. There must and inevitably will be some future mechanism on a national scale to adjust the relations between industrial groups, including proposed organizations of both workers and employers. For such a mechanism, the guild congress above mentioned is a suggestive idea. Guild socialism presents in general a most profitable form under which to visualize and discuss the future extension of both trade unionism and government ownership.



## 2. *Socialism in Britain and America*

The real situation with respect to adherence to such schemes as have been discussed, is set forth in a recent article by J. A. Hobson. His reference is partly to British conditions but its relevancy is increased by this, for the situation of Britain is more advanced than our own but at the same time very much what we may expect to develop here:

Nobody really loves the state or its government. No business man, few workers, or other members of the community, at any rate in Britain or America, want any more governmental interference than seems indispensable. As a result of the war (itself the most concentrated and extreme state socialism) governments as business instruments are everywhere discredited—probably beyond the merits of the case. The popular nineteenth-century propaganda for wholesale state ownership and operation of “all the means of production, distribution, and exchange,” has no substantial appeal to the labor or any other elements in Britain, though it still figures sometimes on platforms and programs as a pious formula. The trade unionists who form the vast majority of the British Labor Party are neither in heart nor head state socialists, in any sense that corresponds to the formula. Their economics is one of local trade autonomy, qualified by certain limited measures of state aid and regulation. With good-humored indifference they allow a small energetic minority of I. L. P. or other “Socialists” to represent them at congresses and to commit them formally to large propositions about which they understand and care nothing. But the I. L. P. and other little “revolutionary” groups do not really stand for the orthodox policy of state socialism. The day when citizens and workers seemed willing to entrust the conduct of state or municipal undertakings to the unfettered will of elected or appointed officials has gone by. It is partly the result of experience in showing how difficult it is for the general public, either as consumers, workers, or citizens, to control officialdom; partly the displacement of revolutionary ideas by evolutionary opportunism among the thinking leaders. But chiefly it is the growth, under the stimuli of trade unionism, guild socialism, and syndicalism, of a demand for new modes of industrial government in which the employed shall everywhere have a voice or even a control of the conditions of employment, and perhaps some property or vested interest in the business to which they contribute their labor.

All this movement as yet is vague and inchoate, but it is making experimental advances along various roads. Nor does it find a wholly unfavorable reception in capitalist and employing quarters. In England, the classic land of compromise, there is among large numbers of employers a growing disposition to make large concessions from the earlier absolutism. In an increasing number of trades the practice of collective bargaining is accompanied by the setting up of a machinery of common consultation between representatives of employers and employed upon

matters of common interest. The Whitley Councils, providing for such common action in the several works, district and national industries, have been in effect a large extension of practices long established in many of the textile, metal, and other organized trades. They stand not merely for settlement of wages, hours, and other "disputes," but for concerted active policies in the improvement of trade methods. True, they constitute as yet no formal curtailment of the financial or administrative control by the employer, but as these managerial functions clearly influence conditions of employment, the earlier limitations of Whitleyism must evidently yield to a fuller measure of coöperation. If, as is evidenced in a few more liberal businesses, workers' representatives, as directors or otherwise, are admitted into the inner managerial circle, it seems evident that we are heading along a road far removed from socialism.

One further capitalist concession advocated by a few liberal employers deserves attention, being more radical than any of the others. Why not withdraw the sting or stigma of "profiteering" from a business by putting its capital upon a minimum subsistence basis, already done so far as debenture capital is concerned? Or else, a judicious compromise upon the extreme proposal, why not fix minimum rates of interest on capital and minimum rates of wages for labor, and then by common consent of the two parties distribute any surplus in an agreed proportion between capitalist and worker?

The prime indispensable condition for such experiments in pacific coöperation between capital and labor is the strong organization of both parties, trades unions and big business working together in amity for a common cause. But what cause? The public? The least reflection serves to show that separate trade combinations of capital and labor can of themselves furnish no solution of the graver economic problems, and might even open up new modes of social conflict. An era of private combination may be as costly, wasteful, and dangerous to the public as the era of private competition it displaces. The capital and labor in well organized industries controlling the prime necessities of life or trade, such key industries as railroads, mining, power, iron and steel, banking, are evidently in a position to extract preferential terms for their capital and labor from other industries and the consuming public. Already there are clear indications in Britain of a disposition on the part of capital and labor in strong sheltered trades to secure for themselves gainful conditions, partly at the expense of other trades exposed to competition in the world market, and partly at the expense of the consumer.

The loose notion that capital and labor can get together for the settlement of their disputes and for operation of the industry in their common interest without danger to other trades and the consuming public is a puerile optimism. Either combined capital, or combined labor, still more a joint combine, in mines or electric power could evidently blackmail the nation in fixing rates and prices and limiting supplies. They need not do so in the blatant manner of the highwayman. But they would be in a position to decide what reasonable rates, reason-

able profits, reasonable wages were and to impose them. The necessity of some common arrangements among the diverse industries to obviate their policy of separate pulls and to give security to the consumer led the British Government to summon a National Industrial Council in 1919, in order to devise a policy of industrial peace and progress. When the tension of the post-war situation slackened this project lapsed. But no intelligent politicians or business men in Britain believe, whatever their desire, that the state can leave the public unprotected to the mercy or generosity of strong combines of capital or labor or both.

Every one is agreed that if the ownership and operation of mines, railroads, and power be left in private hands, drastic control by the state will be required. In these and other virtual monopolies the policy of state control moves in four directions:

1. Satisfactory conditions of employment as regards wages, hours, provisions against unemployment, etc.

2. Regulation of prices and rates in the interest of users and consumers.

3. Limitations of profits by taxation of the surplus.

4. Standardized publicity of accounts to secure an informed public opinion.

Socialism in Britain is just now halting at this stage. But the unpopularity of state interference and officialism cannot stay the tide. If adequate protection for the general public can be got by state control along these lines, public ownership and operation may be averted. It is just here that the new liberalism of Britain separates itself from the socialism of labor. Liberals believe in the efficiency of this publicity and limited control by the state, though they do not formally disclaim all public ownership. Their position is stated in the following resolution adopted by the National Liberal Federation in 1921 and 1923:

"That the nationalization of all the means of production, distribution, and exchange is inadvisable as tending to destroy freedom, check initiative, and impoverish the people; but that certain industries and services may be advantageously nationalized or municipalized, each case being considered on its merits."

This really means that only in case publicity and control fail to secure the people against the extortionate conduct of private profit-seeking corporations will public ownership be favored. Even among conservatives no sentimental or theoretic objections against socialism would preclude support for the nationalization of mines and railroads if control proved ineffective and fair terms of public purchase were offered.

The real issue, then, is not between socialism and free private enterprise, but between public ownership and public control. If a Labor Government with a working majority comes into power in Britain, its socialism upon the side of nationalization would extend to a few key industries—mines, railroads, electricity, banking, and insurance. Through these and the government taxing power it would endeavor to make private enterprise in ordinary trade conformable to the public interest.

Its other sides of socialism would be the imposition of minimum standard conditions for all workers and the development of educational and other opportunities of personal freedom.

If the present anti-socialist Government in Britain were wise and foresighted it would do all in its power to develop a system of effective state control. But the profiteering business interests will probably make this impossible. So the grip of strong combines, with concessions to favored groups of workers, will mark this era of reaction; preparing the way for a vigorous period of labor socialism in the not distant future.

How far the American movement corresponds with the British in general outline I will not pretend to judge. Distrust of the state is far more widespread and deep-rooted in America. Autocracy in political or industrial government seems more easily accepted or less resented. The idea that the big-business man, who is "doing things" in railroading, finance, or manufacture, should submit to serious interference, on the ground that he is arbitrarily ruling the lives of thousands of workers or citizens, or is making too much money, seems to have little purchase on the public mind. There is, I think, a marked difference between public opinion in America and Britain which may be illustrated by an example. In England there is a genuine and wide acceptance of the doctrine that undeveloped natural resources should "belong to" the public, and that, even if private enterprise participates in their development, their value should accrue to the public. As regards mineral rights, industrial power, future site, and other land values, not only labor men and liberals but many conservatives would assent to this public policy. This involves not merely control but ownership, i. e., the conservation to the people of specific property rights. How far is this doctrine accepted in America?

Not only does socialism in the limited British sense of nationalized railroads, mines, etc., seem ruled out as a practicable policy, but the reality both of conservation and control appears to have no recognition in the ruling class. Let me cite Mr. Hoover as a capable, fair-minded exponent of this plank of good Americanism. First we are told that "we are passing from a period of extreme individualistic action into a period of associated activities," i. e., competition gives way to combination. Then we learn, "It is the business of government to regulate and control, not to manage or operate." The best case is power, the prime source of modern industrial life. Power is a natural product and as such might be conceived as "belonging to" the community. Moreover, as Mr. Hoover says, "Power development is a public utility. Its purpose is social service." What, then, would Mr. Hoover do with this "public utility"? Hand it over to private companies whose "purpose" is profit, not "social service," leave them free to operate it, without imposing "unnecessary restrictions on power development" or the hampering policy of "a general survey of power resources" or "imposition of excessive taxation." Not only is the state to keep off its interfering hands; it is to bestow upon these private companies its public powers. "Public



utility companies are agents of the state and as such should have, under proper safeguards and on the certificate of 'appropriate authorities,' the right to acquire power sites and transmission rights of way in the same manner as the state itself—by the exercise of the 'power of eminent domain.'" Are intelligent Americans satisfied with the ability of this doctrine of agency, its "safeguards" and "appropriate authorities," to protect the American people against the intrusion of other purposes than "social service" into the operation of this key industry, endowed thus gratuitously with the free run of national and legal monopoly? I know what is at the back of Mr. Hoover's mind. It is the curious psychological mixture that seizes all business men in the face of big profitable opportunities. It runs into these shapes of thought and feeling: (1) We can do it better than any public body, and the less the public interferes the better we can do it. (2) We shall make big money, but this is a necessary stimulus to high initiative and energy. (3) We shall give the public good and cheap service, for the conditions of large, profitable output will compel and enable us to charge low rates.

The first two propositions are genuine beliefs, the last is a false "rationalization," which every trained economist can at once detect, though it lies ineradicable in the business mind.

I would end this tentative inquiry with a question on the nature of the government control and regulation, proposed as the limits of state intervention in industry. Can control be made effective without so much inquisition into costings, so much legal and enforced regulation of labor conditions and of prices, so much publicity and detail of accounts, as seriously to interfere with the free management of the business? Those who rule out on principle all public ownership and operation of the national resources of materials and power, and hand them over to private companies, are under an obligation to put some clearer meaning into the terms "control" and "regulation" upon which they rely for securing the interests of the people against abuses of the monopoly powers which their policy must generate.

In Britain a slow but steady and insistent movement is making for public ownership of these industries, combined with a machinery of operation in which the knowledge and interests of the business staffs, technicians, and manual workers shall be duly represented, though the state, in which the property is vested, shall have a final voice in decisions.

This I hold to be a natural outcome of the principle of self-government in British life. It involves a certain sort of guarded confidence in the state and electoral institutions. Possibly in the United States that measure of confidence does not exist and is unattainable. But in that case it is difficult to understand how Mr. Hoover and his business friends can hope to persuade the American people that the difficult and intricate task of public control and regulation will be honestly and effectively exercised. Or does it come to this, that the American people are willing to accept from big business such public services as are consistent with the

profit-seeking motive, believing that this moderately benevolent autocracy will do better for them than they can hope to do for themselves? <sup>1</sup>

#### QUESTIONS FOR THE GUIDANCE OF STUDY

1. Are there any similarities between syndicalism and guild socialism?
2. Enumerate and explain the differences between *state* and *guild* socialism.
3. What progress has guild socialism made in practice? In what country has it won its greatest following?
4. How would the guild socialists correlate the political state and the management of industry?
5. What is the present state of socialistic thought in Britain and America: points of difference and likeness; mechanisms and philosophy?

<sup>1</sup> Quoted by permission of the author and the editors from *The Nation*, cxx, 408-410 (April 15, 1925).

*PART V*

CONCLUSION





## CHAPTER 36

### TOWARD AN EXPERIMENTAL ECONOMICS

#### 1. *Our Philosophy of Despair*

Perhaps the clearest conclusion one comes to after surveying the American economic situation is that life holds thrilling potentialities for the youth of our time. The problems we face are not desperate ones. They call for difficult efforts of thought and for sustained labor. But they nowhere seem to face utter frustration. We are not forced to consider how we may escape from starvation nor even from the privations of a destitution even less severe. The final extinction of our race and its culture through the failure of nature's goods seems utterly unthinkable in any likely future. Our problems are of a different sort, less negative than this, more constructive. We have to raise levels of living that are already the highest ever attained in man's long history, that are far higher even than those of the present time in any other place or among any other peoples.

It is time we came to a realization, however, of the need for this. We have tried to show, in some of the earlier chapters, that, by any ideal standard, we still have a problem of poverty. So if we calculate quite coldly the amount of food, the kind of houses, the quality of clothing, the variety of amusements, the provisions for health and well-being that would create a civilization lived completely upon the comfort level or above; and if then we calculate the money incomes of the masses of Americans, we see how great a discrepancy there is between what we have and what we should like to have. We frankly want and look forward to a life of a different sort from the one that is at present available to most people. The sort of blighting misery that is a common feature of life in many European cities<sup>1</sup> we do not have—or very little of it. Descriptions of that life happily sound unfamiliar to our ear.

No! The problems we have are essentially those of making

<sup>1</sup> Cf. William Bolitho's description of conditions in the Glasgow factory districts in his *Cancer of Empire*, 1925.

a life, already the best man has ever had, even better. Measured by the facts of life elsewhere, it is good. Measured by the possibilities of the future, it is less than we may expect. And the task of youth is to create from this expectation the reality of achievement. It has been in the desire to set the eyes of men upon this goal and to point out some of the roads to the future that this book has been written. The youth of the future will not have to struggle against an ever impending doom. His work will be carried out upon a higher level—on which fear will not *drive* with its lashing whips, but on which fortune will rather *beckon* to new efforts of creation. So new and higher motives will come into play. Many generations may possibly intervene before the constructive qualities in mankind can be fully released for the pushing forward of civilization and before the old qualities of suspicion, fear, and hatred can be smothered in the rush of creation, but the time has assuredly come when we may look forward to it with some confidence.

The fact is that we have both prosperity and poverty, both surplus and deficit; and we are not able to choose between them. We have classes who live in no fear of want, who are assured that a good livelihood will result from their economic efforts, who live secure from the wolf that waits by the doors of the poor; but those poor, as Christ saw so long ago, we have with us still. They live in constant fear that, in spite of their best efforts, somehow calamity will descend upon them. A period of mysterious business depression that closes mills and factories, the introduction of some new machine or process, a change in the wants of people, old age, accident—all have a frightful power over their lives and the lives of those for whom they feel a responsibility.

So much, the most casual observation makes plain. There is a constant shifting of the proportions of those who live in each of these sharply contrasted conditions. At one time many, at another time fewer, live in the free air of prosperity. There are many even of the prosperous who have known poverty; and those who have felt the ghostly touch of its fear never really forget the shudder that then shook them. They are quite incapable of freedom. They look at existence through eyes that are darkened by that single old experience: it seems to them simply that life is a double struggle—man against nature, and man against man. All their

attitudes and all their reflections are dominated by this conception of a hunger that lies in wait. It becomes an enemy of popular prophecy, of social expectation. The fact that we live in an age of economic surplus when prosperity—not for a few, not for any group of any class, but for all—hovers imminently on the edge of our civilization, is quite hidden. We have eyes but we cannot see, being withheld from vision by the old fog of poverty philosophy that hangs over our world.<sup>1</sup>

The National Bureau of Economic Research established our national income at some sixty-six or sixty-seven billions,<sup>2</sup> and Mr. Friday said boldly in 1923, "We are within striking distance of an economic order where the means of well-being shall be established for all."<sup>3</sup> This statement he has reiterated many times, without contradiction. And these are no new generalizations. Simon N. Patten knew all this to its furthest implications and preached his philosophy of prosperity for forty years.<sup>4</sup> But there were few to listen, and our heritage of dismal thought that "grew up beside the meager turnip fields of England" continued its influence unabated.

One wonders why men are so afraid of good fortune, of favorable facts—for they are facts. One would suppose that such news for humanity would be seized upon and carried in the streets on joyful banners; and that the intelligence of humanity would see at once that its first business is the organization of ways of utilizing surplus for happiness. After all, it is a simple business to do what has to be done first in the economic world to make people happy; but nothing of the sort has happened when again and again attention has been called to our potentialities of prosperity. Herbert Spencer, Karl Marx, even Henry George, enjoy a greater vogue in America—the America of three and a half billion bushel corn crops—than does Patten who, unlike those others, came straight out of the fecund mid-century soil of Illinois.

<sup>1</sup> Cf. "Our Philosophy of Despair," by R. G. Tugwell, *The University Journal of Business*, ii, 428 (Sept., 1924).

<sup>2</sup> Estimate for 1919. We must have added many billions since then.

<sup>3</sup> *The New Republic*, xxxiii, 273. Cf. also his *Profits, Wages, and Prices*, Ch. XIV, "How Can Real Wages Be Raised?"

<sup>4</sup> See, for instance, his *Theory of Prosperity*, his *New Basis of Civilization*, and his "Reconstruction of Economic Theory," in *Essays in Economic Theory* (Knopf, 1924).

We are like a chosen people on a dividing ridge between the desert, through which we have just come with pain and struggle, and the promised land, in the hope of which we have been sustained in the terrible journey. We stand facing the desert, thinking desert thoughts, forming desert words, when all the time at our backs, in plain sight and even seen occasionally over our shoulders, there lies the land of milk and honey. We progress backward, crab-fashion, down the easy slope, mumbling about sand and dryness, the need of provision for desert life, the dangers of travel, and the sins and sorrows of a homeless folk, when we might run like children, shouting joyfully, down into grassy, well watered valleys, privations forgot, hearts full of an opulent tomorrow.

It is no accident but the same old incorrigible despair, that causes our prophets, our artists, our thinkers either to turn their eyes backward to the medieval side of European life, relics of which still exist, or to select the worst in American life as typical of the whole. This passes readily under the convenient name of realism, whereas, in fact, it represents only a distorted verisimilitude of our life. We expect the Socialists who have their theoretical roots in nineteenth century Europe to present misery as the typical aspect of twentieth century America. We are not surprised when we find that economics has not entirely recovered from the gray gloom of English fogs; but we may be pardoned a wonder when America herself breeds a generation of novelists and poets who have entirely overlooked the promises of a rich future beneath the surface uglinesses of our industrialism. In some sense it is selective. We want the thing we get from Sinclair Lewis; and so a host of other Lewises spring up. Lewis did not start a tradition—he merely confirmed it—but it is not the American tradition, as we shall some day find!

There is this much to be said for the Lewis school: they state the matter clearly and without confusion. They are all against what they are able to find in America. Not all of our thinkers are so clear. They know the promise but they are not willing to give themselves up to it and they waver between the notion of surplus and the notion of deficit. There is an excellent illustration of this in Scott Nearing's book *The Next Step*. He opens with these sentences:



The knell of a dying order is tolling. Its keynote is despair. Gaunt hunger pulls at the rope, while dazed humanity listens, bewildered and afraid. . . . The war showed the impotence of the present order. . . . Yet the failure of the revolutionary forces to avail themselves of the opportunity presented by the war proved the unreadiness of the masses to throw off the yoke of the old régime and to lay the foundations of the new order.

Notice that the keynote of Scott Nearing is also despair and that the foundations of the new order are not yet laid; yet, if one reads on, he discovers that Scott Nearing knows perfectly well that this isn't so. He presents a rational and, as it seems to us, particularly well ordered plan of march upon the promised land. Economic federalism seems to him to be the method of organizing the forces of progress that will lead us there. He says all that forcibly and persuasively, and comes (on page 163) to this really astonishing paragraph to a reader who has attended his opening words:

In the past only the favored few had a chance to express their most holy aspirations. The development of modern industry, with its facility in the production of livelihood, promises a time, and that at no very great distance, when this opportunity may be common property, and men everywhere may be able to participate in that unending search after love, beauty, justice, truth—the highest of which humanity is capable.

There is a deep confusion here, the same confusion that torments so many thinkers of any and all complexions. It is most serious, of course, when it is found in social science. Nowhere is it so prevalent as in social theory, for economics has its background in the English classicists, sociology in Spencer, and politics in Locke and Montesquieu. It will not be resolved until we definitely turn our backs on the desert philosophers and gain a clearer view of the promised land, that green and fruitful place. Meanwhile we lack the vision or the resolution to choose from the elements of life the enduring ones, the ones that shall among them shape the future.

There can be no doubt that we live in a time when there is misery and suffering, but it is unnecessary to assume because of this that misery and suffering are the significant features of the future. Indeed, it is difficult to think otherwise than that much of the condition that we deplore continues to exist because we will

not to enter into the kingdom. A nation that, in a single year, can add upwards of ten billions to its capital surplus and that chooses to ignore this fact in favor of gaunt hunger pulling at the rope of a funereal bell that tolls a knell of death, is in a pathological state, no less. Our social strength grows immeasurably, our evolution prepares the new order; how long shall we permit this disease complex to keep the forces of liberation supine and valueless?

## 2. *This Book and the Tasks of Youth*

In the hope that the eyes of youth may be turned toward this promised land—not forgetting the problem of poverty we face in the present, but not allowing it to dominate our thought, our shaping of institutions for the future—this book carries the subtitle to American Economic Life—*The Means of Its Improvement*. Most of our effort here has been spent in pointing out the elementary and obvious means of moving forward in economic life. So we considered the means of raising standards through bettering the technique of production, through a juster apportionment of income, through the rationalizing of the use of income and through the various suggestions that are prominently made for institutional reorganization.

Most progress of all, perhaps, has been made in bettering production technique. This is because the problems presented here are easiest of solution, calling, as they do, for the minute betterment of processes and for invention and reorganization within a going system rather than for a difficult working out of social relationships. Men's minds take hold of the problems of work upon material things more avidly than they attack the problems of the organization of social institutions and of revamping social relationships. And our more conspicuous failures in production, significantly enough, have occurred at the places where the larger considerations have intruded upon the working out of the technique of shaping material things. The "labor problem" is one of these failures. The problem discussed above under the heading of "making goods and making money," where it was pointed out that the very *system of business* involves the withholding of effort and the reduction of the output of goods, is another of them. We have got to the point, indeed, where further advance is condi-

tioned upon *social* thinking rather than *mechanical* thinking. It is usual for economists to slight these disturbing features of economic life. But we could not have been steady in our purpose to point out to youth the means of improving life if we had done so here. The coming generations must somehow find the solutions their fathers have failed to find, and the sooner their eyes are set upon the key difficulties they must solve, the better, so we have felt.

In discussing the apportionment of income we have also kept these considerations in mind. For here, in the past, we have proceeded haphazard and have evolved a system of apportionment that is as indefensible in its logic as it is disastrous in its consequences. We have pointed out that social policies, entered upon without any intelligent consideration of their ultimate results, have in fact so arranged matters that our enormous annual national incomes are badly apportioned; so badly apportioned, in fact, that eighty-six per cent of our people still live in poverty, while a very few command an immense aggregate control over income that permits them to indulge in such wastes and extravagances as were never known in the world before. We have asked young men and women to consider what social arrangements can be made for changing this situation and have pointed out the responsibilities of governments in the matter. It is difficult to retain any sanity of discussion in this field; it is one in which the emotions are easily engaged. But we have tried consistently to avoid emotionalism and to apply the test of consequences in order to see what program might be best for all people.

Our discussion of the uses of incomes was also relevant to the main purpose. We pleaded for wisdom and tried to make it clear that wisdom in this matter was to be attained by understanding how one chooses and in revising choices in the light of their consequences to the individual, to the various groups with which he is affiliated, and to the nation as a whole. It was our conclusion that a sort of symphonic masterpiece of the life of use might be worked out by each individual for himself which might become whatever kind of masterpiece his own capabilities would permit. We found ourselves rather against compulsions, and rather for social persuasion as against the indiscriminate persuasions now being so widely used. But we hoped, here again, for a new vision,

in the youth of coming years, of the significance of genuinely creative living that should contribute to a better future.

We found ourselves, when it came to a consideration of proposals for comprehensive schemes of institutional reorganization, with considerable sympathy for the impulse which outlined them, but with reservations of doubt concerning the possibility of men's adopting any of them wholesale. And these doubts rather destroyed the need for discussing their details at any considerable length. What suggestions each of them possessed which might help in formulating programs for the future we tried to make clear. In coöperation alone, which depends upon the voluntary linking up of the individual with the groups through which he necessarily functions, and upon his merging of his own interests with those of his group, were we able to see a possible suggestion of future development. Coöperation might indeed be called *voluntary socialism*, for that is what it is. We spent some time in showing its development in various fields at home and abroad and, by implication, asked for it the consideration of the generation to which this book is addressed.

### 3. *The Experimental Attitude*

In all of this the authors have been concerned to further an experimental attitude toward the problems, to put the test of consequences first, to make it clear that a suggested solution is good only *if it works*. The materials of social science are peculiarly unamenable to the kind of experimenting that has contributed so greatly to the development of such natural sciences as physics and chemistry. But experiment is not impossible provided institutions and arrangements in industrial life can be completely conceived as instrumental. When we think of them as instrumental we are willing to think of their use as temporary, and of them as only imperfect agencies for attaining certain ends we have in mind. We realize that men imagined them as useful for some human purpose and that when human purposes have changed or the means of attaining the purposes have shifted, the instruments are no longer the best ones to use.

The difficulty in attaining this habit of mind toward the arrangements we make arises largely from our confusion of ends and means and from our susceptibility of emotional attachment



to the temporary instruments of social life. If we have pleaded for reason in economic relationships here it has been because of a realization that these emotional attachments harden easily into irrevocable attitudes that prevent change and hamper progress. Perhaps as good an illustration of this as can be found is the unreasoning, almost hysterical, attachment of conservative Americans to their Constitution. An experimental attitude would prevent this. It would conceive of the Constitution as an instrument, would want it to be revised as changes made revision imperative, would see that refusal to revise it might result in a rising pressure of popular indignation that might explode with terrific force and disastrous social consequences. This is only one illustration of American's emotional attachments to institutions. Many of us are almost as fanatic in our attachment to private property, to capitalism, to the protective tariff, to individual bargaining between employers and employees, and to many other similar arrangements. It seems difficult to believe that an employers' association would have the effrontery to name a movement for the open shop "the American plan," but it did so. The attempt was obviously to capitalize the patriotic impulses of all of us in favor of a passing, antiquated system of employer-employee relationships that happened to be favorable to the immediate interests of employers. The experimental attitude is adequate protection against hysterical manifestations of this sort.

In order to be an experimentalist in economics it is not necessary to attempt to reduce actual industrial situations to laboratory simplicity for manipulation. This is the lesson we must learn. It is only necessary to consider all the arrangements we make as experiments, in a sense, and especially economic arrangements, which in our generation are passing through such a rapid evolution that a hardening of institutions around them is positively dangerous. The many manifestations of social unrest we see around us contain sufficient evidence that this is so. Flexibility, a continuing attitude of questioning, is the most difficult of all attitudes to maintain. We all are more comfortable if we can attach ourselves to certain institutions and identify ourselves with them, they protecting us and we protecting them. In a primitive, static society there was a survival value in this. In

our own rapidly changing society the survival value has shifted. Society itself can survive only if it submits its arrangements to constant revision. To use a possibly absurd but illuminating illustration, suppose we all become deeply attached to the use of coal and to our system of arrangements for its mining and distribution—and then suppose all the coal were used up! We should be left high and dry with our foolish attachments waving in the air. It is scarcely less foolish for us to have such an attachment to the open shop, to absolute private property or any other such institution.

It remains only to be said in conclusion of this book that the authors have meant always to maintain—indeed, also, to foster in their students and readers—this experimental attitude. They have never meant, at least, to be dogmatic, only tentatively helpful. They have never meant to discuss problems to the point of closing argument, only to open them more widely to rational consideration. For conclusions concerning most of them would be premature. Our own deep interest in the quality of American life has been a fundamental motivation. Our general faith in its future and our specific respect for the intelligence of American youth determine our confidence, also, that the problems we face so uncertainly now will find far more certain answers in their minds. If only we have assisted in making clear some modern dilemmas and in enlisting the enthusiastic optimism of those to whom we must look for the eventual carrying on of our work, our book will have had all the success we could wish for it.

THE END

## SUMMARY AND OUTLINE

### A. Introduction: Economic levels of living, and the means of raising them.

- I. Some people are rich and others poor; throughout society people possess varying amounts of wealth, and there is a general correspondence (though not absolute) between their level of wealth and their level of health, culture, and happiness.
- II. The ideas of riches and poverty are to some extent relative to the point of view; what one group or age considers riches, another (accustomed to more) may consider poverty. But within a certain group (such as the United States, now) we have fairly definite ideas of what the words mean.
- III. Health, culture, and happiness are not always proportional to wealth. Many people have attained them in high degree with small wealth; the wealthy often misuse their opportunities. But looking at society in the large, one can see that economic goods are a means to physical and mental development. People possessing fewest goods are, in general, deprived of necessary means to health (good food, shelter, clothing, recreation, medical assistance, wholesome conditions of work), and of means to culture (health, freedom from worry, leisure for education, work that develops intellectual and artistic powers); without these happiness can hardly be expected. Moderate wealth and comfort make these things more possible; the cultural achievements of the "middle class" verify this. Extreme affluence gives extreme power, opportunity, and freedom from drudgery; but the rich have not always profited by them. Why? Perhaps there is a level, short of affluence, best fitted for development; perhaps some care and some unfilled wants are beneficial; perhaps the failure is due to ignorance, and great wealth could be more effectively used; perhaps the temptations to the wasting of goods and of one's own energy are too great when there is unlimited access to all kinds of goods.
- IV. It is almost indisputable, however, that most people would be benefited (as to health, culture, and happiness) by raising their economic level; many desire and are trying to do so, but find it difficult. Our present task is to consider possible ways of raising economic standards in society, with special reference to the United States.
- V. Before dealing directly with the problem of raising standards, we must see more clearly what the present facts are; what, specifically, constitutes life on the various levels.
- VI. We shall consider three different economic levels, calling them poverty, comfort, and affluence. Actually, they shade into one another by imperceptible degrees, but we may discern distinctive characteristics of low, middle, and high stages. The differences between them are not created by the having or not having of money alone, but by the quality of life associated with each: not only by the goods—food, clothing, dwellings, etc.—possessed, but by the kinds of work that are available, whether drudgery or inspired creation; and by the amount of leisure there is and the opportunities for making good use of it.

**B. Standards of living.****I. Poverty.**

1. What poverty is: existence at or near a bare subsistence level, with the struggle for material essentials keen, with many individuals falling below and being eliminated through malnutrition and disease. The distresses of poverty are cumulative. Falling behind makes recovery more and more difficult.
2. It implies:
  - a) The securing of no more than a necessary minimum of material goods for the sustenance of life.
  - b) The confining of activities to menial drudgery, with little or no leisure for recreation or opportunity for intellectual development.
3. The specific nature of these goods and activities varies in different environments:
  - a) Poverty in rural life; attempt to gain necessities directly from infertile or insufficient land, with inadequate means of cultivation; exaggerated in Italy, Russia, China. Some farmers in the United States live at the poverty level from habit, though prosperous, thus forcing out others who maintain higher standards. Tenant farming in the South. Hired farm labor; the casual drifters. Early marriage and incessant work for women; many children needed to till the soil, but children hard to care for till grown. Restricted diet; lack of variety; no refrigeration; insufficient means to provide for the future by home canning, drying, etc. Lack of manufactured products (tools, clothing, etc.). Clothing either made directly or purchased, but inadequate. Lack of housing comforts, *e. g.*, heating, plumbing, furniture, kitchen facilities. Long arduous work. Isolation. Lack of educational means, and of leisure. Frequency of insanity, hookworm, rheumatism, tuberculosis, and diseases of malnutrition and overwork; inbreeding and feeble-mindedness.
  - b) Poverty in urban life; the slum-dweller; dependence upon the lowliest, most disagreeable jobs of industry for wages; hand-to-mouth living; estimates of income needed to maintain a family at the level of bare subsistence. Dietary evils; housing concentration; filth and lack of air and light. Monotonous, wearing work and excessive routinization; sweatshop work; unemployment; fear of old age, accidents, and disease. Scant leisure, badly utilized. Typical diseases of degeneration. Excessive childbearing; its reaction on the crowded home, upon society, and upon the poorly cared for mother.
  - c) Poverty in intellectual pursuits; the artist in the garret. Is his work a compensation? Does poverty spur his efforts or distort his art? Thoreau at Walden and Poe in New York illustrate the contrast; exceptional cases secure happiness with few material goods; the majority warped by deprivation and non-sharing in the comforts of life.

**II. Comfort.**

1. By comfort we mean a state intermediate between poverty and affluence. In contrast with poverty sufficient material goods are obtainable, without keen struggle, to satisfy basic demands and to provide some moderate luxuries; work available to those in comfortable circumstances offers some outlet for creative powers. In contrast with affluence, however, there is not a complete freedom from the need to work for a living under the usual conditions imposed by society; not everything purchasable for money is within reach.
2. The comfort level in *rural life*.
  - a) Here we may place the primitive dweller in a temperate climate provided with game and wild plant food, where conditions demand a life



of action and cunning, bringing health and alertness, where neither excessive cold nor barren soil makes work unprofitable, and where the generosity of nature does not make it altogether unnecessary. Here, too, the contemporary farmer of fertile soil, with sufficient acreage and tools, in a temperate climate; his work makes him active, shrewd, self-reliant; he remains simple in tastes. He has the necessary balanced diet, grown at home or (more or less reluctantly) imported; he has rough but adequate clothing; he takes occasional journeys. If of the old school, he has little to do with abstract thought or with art for its own sake; he is usually religious; he reads his Bible and holds strictly to absolutist moral ideals from which departure means shame. His wife is busy with household tasks; their home is of the central tradition of America, big, hospitable, the gathering point of family life, sufficient for every need but rather solid than conspicuously ornate. If of the new school, he and his wife are increasingly affected by city ways and ideas. The cheap automobile replaces the horse and buggy, good roads allow travel to town; the phonograph, the movie, the radio, and the cheap periodical bring him into touch with middle-class city culture; these media of information transmit much that is essentially vulgar; but also some useful practical science, an introduction to literature, a knowledge of how other people live, contrasting political and religious ideas, fashions in clothing and house furnishings, and views on the independence of women; these influences are apt to attract his children to the cities, and to stimulate a taste for luxuries and city amusements at home, thus creating problems of their own.

- b) Rural life other than farming: cattle and sheep raising; forestry; professional people in the rural life: the minister, the country doctor, the mail-carrier, the teacher, the trader.
3. The comfort level in *town and city life*.
  - a) Types: the small shopkeeper; the skilled artisan; the clerk, accountant, or small official in large establishments; the doctor, minister, school-teacher. Their income: profits, wages, fees, and interest from investments in small bonds, stocks, and mortgages.
  - b) Estimate of money income sufficient for comfort in present American towns; variation in necessary amounts. What it buys in concrete goods: housing, apartments or small suburban houses, furnishings and possessions; customary diet and clothing.
  - c) Tendency to rate family socially by make of car, section of town, etc.; social climbing; rapid changes in social strata.
  - d) The wife and her interests: housework; its increasing ease, with consequent leisure and often boredom; bridge parties; women's clubs; philanthropic activities. The servant problem. Her children educated at public school; lack of responsibility; the question of affording college. Wage slavery and money worries often intense because of greater demands and of the higher standards encountered and desired but difficult to attain.
  - e) The man's working life: above extreme grinding monotony of factory labor, but often without great scope for development or originality. Tendency to routine or hard, unscrupulous competition. Greater chance to rise than in old countries. Greater measure of responsibility, power, and scope for thinking in the higher ranks of various occupations.
  - f) The man's leisure and recreations: gardening (in suburbs); card playing; professional sports; movies; newspapers and cheap magazines; traveling shows in small towns. High-grade concerts and theaters in the metropolis. Free public libraries. Increasing sale of books and magazines; dissemination of culture. For younger people: dancing, sports, excursions; the amusement park and the summer resort.

- g) Loosening hold of churches. Their function in aiding sociability; decline of church-going.
- h) Changing views on religion, morals, politics; influence of newspapers. Mixture of religions in cities.

### III. Riches.

1. Number of large incomes in the United States: those over \$100,000, those over \$1,000,000. Comparison with other countries. Recent increase in number of rich.
2. Sources of these incomes: investments in real estate, corporate shares, and speculative non-corporate enterprises; wages, especially for management in industry; other highly paid services (*e. g.*, moving picture actors, corporation lawyers, and other specialists). Proportion of large incomes earned in these various ways.
3. The rich man's work: the business executive; nature of his work; the captains of industry; examples; their accomplishment in building up the nation; "hard work and responsibility" often, but high pay; also, in many cases, their judicious sabotage of developing social forces, gaining fortunes at the expense of social welfare; unscrupulous practices which have yielded large fortunes; persistence of many in active work after fortunes are made. The second generation; the rich man's college and club; shallow education; habits of luxury after college; entering business, especially stock brokers and bankers; management of own estate; small, often merely nominal, participation in business. Philanthropy; founding of institutions, *e. g.*, hospitals, universities, libraries, scholarships; research institutions, *e. g.*, Rockefeller, Mrs. Russell Sage, Carnegie. Small part played by rich in country's intellectual or artistic life. Intervention in politics, directly and indirectly, largely in defense of own interests. Compare with political activities of European nobles and capitalists.
4. His wife and family: her lack of definite function in life; no longer needed to perform or even supervise home tasks; management of house and children delegated to governesses and private schools. Town house or luxurious apartment; automobiles. Interest of some in philanthropy and settlement work. "Society," dinners, entertainments; attempts to be exclusive on basis of birth; "the 400"; rise of new rich and rapid breaking down of divisions. Aping of nobility; intermarriage. The country house with few living wholly in country, but many maintaining elaborate summer homes; the model farm, hobby of a few; the fashionable suburb, with houses imitating Italian villas, medieval castles, French châteaux. The country club as a center of sociability; golf, motoring, dancing. Horse shows. Summer and winter resorts; Newport, Palm Beach. Aimless existence and boredom of many; intrigues and divorces. "Conspicuous waste and vicarious expenditure."
5. The life of most people at present on level of affluence does not constitute an ideal of health, culture, or happiness; wealth not a guarantee of good living. But it is a means to it, whether used so or not; question of what constitutes good use in work and consumption is a moral rather than an economic question. It will be touched upon occasionally hereafter, but for the most part it will be assumed, from the economic viewpoint, that the increase of wealth is a desirable thing. For the lower income levels, the desirability of increase is more unquestionable. We proceed to ask, then, how this increase can be brought about, and with it a rise in quality of its associated and implied life.

### C. Raising the levels of living.

- I. Raising the levels of living through efficient production.
  1. At least three possible results may be sought in production, any one of

which involves raised levels of living. All of them may, of course, be pursued together.

- a) To produce as great a quantity of goods as possible, of as high quality as possible, as cheaply as possible; the "efficiency" ideal. Any group which receives a share of this increase through increased money income or lowered prices, may raise its level of living accordingly.
  - b) To make the working life itself as satisfying and as beneficial as is possible; to make it an end in itself.
  - c) To make the working life a help rather than a hindrance to a rational use of leisure and of wealth, by so managing productive institutions that they do not seriously encroach on the other areas of necessary human activity.
2. How these ends may be sought in agriculture and in rural life.
- a) By increasing agricultural production.
    - (1) Better use of the soil; scientific agriculture—rotation; fertilization; tillage practice.
    - (2) By control of the hazards of production and by increasing the available land area.
      - (a) The control of climatic hazards: introducing new species; breeding for adaptation; irrigation, drainage, dry farming, smudging, etc.
      - (b) The control of diseases and pests: breeding for resistance; vaccines, medication, spraying, etc.; prevention of the spread of diseases by quarantine.
      - (c) Increasing the area of tillable land: better types of farming, such as "two-story agriculture," flood control, drainage, irrigation, "reclamation," reforestation.
    - (3) By the introduction of labor-saving devices: power and light units, gas engines, tools, automotive transportation, the tractor and its subsidiary machines, concrete, the silo, cutting and sawing machines, automatic milkers, improved fences, tool-sheds, and animal houses.
    - (4) By the introduction of efficiency engineering principles, cost accounting, more careful planning, better farm layouts, better barn and machinery arrangements for saving effort and expense, better judgment in balancing the forces of production to be employed.
    - (5) By closer coöperation; joint maintenance of technological experts for advice such as those available through the Farm Bureaus; joint ownership of expensive tools, irrigation and drainage systems, herdsires, etc.; coöperative financing.
  - b) By bettering the facilities for marketing.
    - (1) Roads and automotive transport.
    - (2) Country warehousing and storing.
    - (3) Railway, canal, and other transport.
    - (4) Refrigeration and preserving by canning and drying.
    - (5) Coöperation in marketing; the pooling of product; coöperative grading, warehousing, packing, and shipping; joint selling agencies; coöperative canneries, creameries, etc.; coöperative credit associations.
  - c) By making rural life more satisfying and beneficial.
    - (1) Improvements in the kinds and hours of work.
      - (a) For the farm man.
        - α) Less heavy, mucking work and more of a sort requiring mechanical cleverness and calling out other than merely physical abilities.
        - β) Need for better management; more headwork and less handwork.
        - γ) The dawn-to-dark day no longer necessary except in emergencies.

- (b) For the farm woman.
  - a) The assumption of some of the responsibilities for education, health, provision of food for the future, clothes-making, etc., by the factory, the school, and modern preventive medicine.
  - β) The revolution in kitchen and household management; the flood of new devices for saving effort that shorten the working day and give relief from many formerly universal duties such as spinning and clothes-making; soap-making; much baking and canning (though many of these activities still can best be carried on in the rural home); the wider use in late years of electric or gas lighting, coal for cooking and heating, and of greatly improved kitchen and household utensils such as aluminum cooking ware, vacuum cleaners, washing machines, ironers, etc.
- (2) Elimination of the isolation and solitude of the farm.
  - (a) The effect of the motorcar and good roads; the telephone and the radio; free mail delivery; and the new participation in village life.
- (3) Improvements in living standards.
  - (a) Health.
    - a) Dietary advice from government agencies; budgeting and the attainment of rational and balanced standards of consumption.
    - β) New ideas of sanitation and housing requirements; the bathroom, the furnace, water supply, sewage, and ventilation.
    - γ) Quicker access to hospitals and civic health centers as well as local physicians through the development of roads and motorcars.
  - (b) Education.
    - a) New central schools with free transportation for rural children.
    - β) Free higher education; with greater variety of possible occupational specialization and training; state universities and schools.
    - γ) Special adult education, especially in agriculture and in home-management technique; short winter courses in agricultural schools.
    - δ) The growth of a special rural press; the agricultural weeklies.
  - (c) Recreation.
    - a) The motorcar; the radio; the moving picture now available in the village; cheapened popular literature.
    - β) Increased numbers of social gatherings with individuals drawn from a wider area, so providing infusions of new ideas.
- (4) Revised esthetic standards.
  - (a) New contacts with contrasting cultures through press, radio, and moving pictures, making for a revision of local standards.
  - (b) Influence of the new rural culture centers in the agricultural colleges.
- (5) Opportunity for the intellectual life.
  - (a) Contacts with all fields of scientific endeavor through the press and libraries.
  - (b) Increase in the possible hours of leisure for avocations.
  - (c) The development of a distinctive rural culture with traditions and a literature of its own; self-examination and criticism.
- 3. How these ends may be sought in urban life, *especially as connected with manufacturing.*
  - a) By increasing production.
    - (1) By supplementing human with natural forces, through the application of physical science.
    - (a) Mechanical principles, long used in simple or in occasional cases, the use of which has been multiplied and extended to more com-



plicated tasks since the Industrial Revolution, such as the lever, wheel, inclined plane, pulley, and the various combinations of all these that are used to form machines.

- (b) Power resources, in use or coming into use, such as hand power or man's own physical effort; animal power or the use of beasts of burden; wind power through the wheel and the turbine; steam power generated from wood or coal and used in the reciprocating engine; gas power from substrata reservoirs in the earth or from coal to furnish heat and motion; petroleum from earth reservoirs used in explosive engines; chemical explosives; acetylene and hydrogen flames; ammoniac or other processes for producing cold; radio-activity with still unexplored possibilities; and the possible future uses of direct sun power, wave power, or atomic energy.
- (c) The effect of industrial research in discovering new materials, forces, or modes of use; and of recombining these elements to secure greater efficiency in production.
- (2) By increasing and more effectively using human energy.
  - (a) Slave-driving (by physical coercion or fear of want) decreasing because of the growing power of the masses who, largely through organization, refuse to be driven; and also because of the growth of democratic and humanitarian ideals, as well as because of the ineffectiveness of this method of securing human effort.
  - (b) Modern methods of securing effort must consequently proceed through the stimulation of voluntary endeavor.
    - a) Workers must find some satisfaction in their work.
    - β) They must feel that reward is a direct result of and in an understandable ratio to effort expended.
    - γ) They must feel themselves identified with the productive group to which they belong by understanding it, by having emotional ties to it, and by sharing the responsibility for its control.
    - δ) They must feel secure in the tenure of their work as well as in the income from it.
    - e) They must be given social approval for their productive efforts.
    - η) Their health must be safeguarded, not only against occupational hazards but against premature exhaustion and old age.
- (3) By organizing human and natural forces so as to eliminate waste and direct all energy to desired ends.
  - (a) The extent of waste in industry at the present time from the engineering point of view: the results of the investigation of the Federated American Engineering Societies. Responsibility for waste largely that of managers; most waste represents a failure of planning and directing, not of executing.
  - (b) The elimination of favoritism in the selection of personnel: the civil-service principle in industry.
  - (c) The need for and the difficulties of directing management to its real job and keeping it there: that of producing goods rather than withholding effort. The contrast between making goods and making money: the temptations in our system to check the normal productiveness of industry in favor of forcing up the price by artificially limiting supply: the results of this in engendering a distrust of industry among consumers and, more seriously still, among the producing workers themselves, who find their efforts to be of service to the community thus frequently checked by their superiors.
  - (d) Greater specialization and coördination.
    - a) The most efficient arrangements are usually, but not invariably, those involving most specialization, centralization, and com-

bination. Small business is still the most efficient for some purposes. Combination under regulation may be useful but may be premature or unwieldy, bringing no real saving of energy; crushing competition only by brute force, by trickery, or by the corruption of government officials. Of these practices there are numerous illustrations in the history of such "trusts" in the United States as the Standard Oil Company, the International Harvester Company, the National Cash Register Company, etc. In such cases the most efficient type of organization, at least for the time being, may be the smaller unit; and the best policy for society may be that of insuring comparatively free competition, preventing combinations, and restraining business methods which destroy competition without benefiting society. Where combination is useful, governmental regulation may be used to secure its benefits to the public.

- β) In all industries there is danger that loss of individual enterprise and freedom for variation may result from excessive organization. All types of organization may well be limited or so modified as to prevent this loss.
- (e) The single industrial individual: the small *entrepreneur*.
  - α) It is less common in manufacturing than in farming to find a single individual who carries on all the functions of production: buying raw materials, assembling, selling, shipping, etc. This was, however, the common thing in the first years of the industrial system and still survives in some small-unit businesses, especially in what remains of the handicrafts, in fine furniture and clothes making, or in specialty businesses engaged in exploiting some small patent.
- (f) The single industrial autocrat: the great *entrepreneur*.
  - α) More common is an individual enterpriser who invests his own capital and borrows some in addition, paying interest for it; buys or rents a site; builds a plant; buys and installs machinery; hires labor; buys raw materials; supervises production; and sells his product, keeping for himself the difference between his outlays and the selling price. This sort of productive unit, run by one man, may reach an indefinitely large size and may become very complex, with all its subdivisions autocratically ruled. It tends, however, to adopt the corporate form when its autocrat dies or when its complexity grows too great for a single individual to manage. The corporation has, therefore, become the typical modern form of industrial organization. It produces more than 90 per cent of all goods in the United States.
- (g) The partnership and the corporation.
  - α) The modern tendency is for larger units to admit more than one individual to a share in the ownership and management.
  - β) Where two or more individuals join to share alike in the hazards and profits of business there is a partnership; but this becomes unwieldy when more than a very few are involved and does not provide, as does the corporate form, for the limitation of liability. Under our law a corporation has a legal personality, so that the obligations of the owners of its shares extend only to the amount they have invested. In a partnership all are fully liable for obligations contracted by any, and to the extent of the whole property owned by all; in a corporation the business has an individuality apart from its owners, and they are not liable for its debts.

- γ) The corporate form is adaptable to any of the various fields of industry in which private businesses operate: manufacturing, wholesale and retail trading, transportation, banking, etc. But we may perhaps consider as representative of modern industrial organization, the structure of a corporate manufacturing enterprise, on both its *technical productive* and *business* sides; and the functions and coordinations of its parts.
- (i) The technical productive side of a corporate manufacturing business:
- (α) The purchase of raw or semi-finished materials, considered technically, apart from price; plant location: the survey of location factors; factory processes: operation and repair of machines; procuring, adapting, and transmitting power; research and consultation for technical improvement; plant administration: layout and routing; measuring and communicating aids such as job study and time and motion study; and the coordination of jobs, processes, and men; personnel administration: hiring and training, maintenance of relations, collective bargaining, and dealing with outside representatives of unions whose members are employed.
  - (β) Typical structure of organization: workers, skilled and unskilled; foremen; technicians; shop superintendents; plant superintendents; general managers of production and consultants such as accountants, engineers, chemists, etc.; general management; and ultimately general corporation officers, directors, and stockholders.
- (ii) The business side of a corporate manufacturing business.
- (α) Estimating the probable demand for the product with reference always to probable competition and the price to be obtained; estimating the probable expenses per unit (including both fixed and variable expenses); estimating the probable movement of the general level of prices and the relation to it of the prices involved in specific business planning; final decision upon the amount and the quality of the raw materials to be purchased and the product to be made, and upon the price to be asked. Budgetary methods and comprehensive planning (with the assistance of technicians and statisticians) are to be found in the best firms; sales management: advertising, salesmen, credit control, collections.
  - (β) Necessary organization of staff to carry out business functions: department heads, consulting experts (accountants, statisticians, engineers, lawyers, etc.) department assistants, etc.
- (iii) General control of operation and capital under the corporate form.
- (α) Heads of technical production and business staffs responsible to the officers of the board of directors of the corporation.
  - (β) These directors elected by stockholders of the corporation who are the ultimate owners. Directors under the laws of most states must be selected from among the holders of shares of stock.
  - (γ) Capitalization: various types of stocks and bonds; the control, theoretical and actual, of their owners over the various departments of business; voting powers and the modes of their exercise; proxies, and the usual actual

- control by a few owners of large blocks of stock; the effect of concentrated and delegated authority; the social importance of distributing industrial control over a large number of stockholders; effect of divorcing ownership of capital from direct management of it.
- (δ) Growing demand of workers for a share in control through representation on directorates; growth and forms of "industrial democracy" and their various effects upon the general control of operation and capital.
- (h) Coördination among businesses (the units of operation in industry), and among industries.
- α) At present effected largely by the middleman-marketing system which supplanted the earlier system of direct sale from producer to consumer. Tendency now to eliminate middlemen and to absorb their functions into the structure of the unified large-scale business; selling direct to the consumer again.
- β) Other connecting agencies.
- (i) Communication and transport services bringing distant producers and markets together, making a virtual world market for many staples.
- (ii) Banks and credit mechanisms, allocating capital and acting as intermediaries between investor and producer, and linking together many operating firms and industries.
- (iii) The development of trade associations for the exchange of information and sometimes, though illegally, under the laws of the United States, for the control of price.
- γ) Tendency for business and industrial units to coalesce.
- (i) Advantages of large scale production—cutting production costs, specialization, etc.
- (ii) Modes of combination and the destroying of competition: pool, holding company, trust, giant unified corporation. Appearance of large, self-sufficient organizations.
- (iii) The problem of allowing or preventing combination. "Natural" and "artificial" combinations; tendency to boost price without cutting cost; monopolies; tendency to routinization. Resultant government policy of preventing and breaking up trusts: Sherman and Clayton Acts; the Federal Trade Commission Act. Difficulty of enforcing: some large combinations obviously beneficial; "unreasonable restraint of trade."
- δ) Government regulation and ownership.
- (i) Present extent: regulation by Interstate Commerce Commission and other boards and commissions—municipal, state and federal. Ownership and operation of post office. Experience of the Railway Administration. Foreign experience.
- (ii) Problem of extending government control into industries already highly coördinated, such as railroads, mines, and telegraphs. Difficulty of securing incentive and efficient management; enormous bureaucratic complexity required. Probable compromise tendencies of immediate future.
- (α) Relation of the financial organization to production.
1. Money and credit.
  2. Allocation and control of capital.
  3. The Federal Reserve system.
- b) By making the urban working life more satisfying and beneficial.
- (1) Improvements in the kinds of work.
- (a) Elimination of the heavy, unskilled, mucking jobs as machines take them over.



- (b) The revolution in factory planning to provide for better uses of modern machinery and machine processes, making machine planning and machine tending the typical forms of modern work.
- (c) The substitution of monotony and mental fatigue for physical exhaustion as the limiting factors in human participation in production.
- (d) Improvement in the sense of self-mastery and of power over the environment through modern extensions (limited though they are as yet) of collective bargaining, profit-sharing, joint ownership and various modes of coöperative participation of the whole producing organization in the control and direction of operations.
- (e) The lightening of work all around making possible the employment of women and children.
- (f) The almost revolutionary lightening of the burden of housework, which, together with the removal from women of the duties of educating the children, has left them free to enter the factories and offices.
- (g) The great growth of paper work and the great modern office-staffs of routine workers: their problems of mental fatigue and the maintenance of physical normality.
- (2) Reduction of the required hours of work.
  - (a) The establishment of the eight-hour day and the 44-hour week as norms; the Adamson Act and other legislative limitations on hours of work.
  - (b) The possibility of further cutting down of required working time: its desirability in monotonous trades; its irrelevancy for professional classes and others having interesting jobs.
- (3) Revised esthetic standards.
  - (a) Great opportunity for a fine and distinctive modern culture in the enlarged social groups of modern cities with increased economic surpluses and increasing leisure.
  - (b) Dangers of clinging to old standards in a new age more serious in the esthetic field than in the technological areas of industry.
  - (c) The need for esthetic training and for opportunity to do creative work.
- (4) Opportunity for the intellectual life.
  - (a) Lengthening the free schooling period.
  - (b) Providing richer educational alternatives with more attention to particularized abilities of the individual child.
  - (c) Provision of facilities for intellectual development to supplement the leisure time provided by shortening the hours of work.
- (5) The problem of excessive social contacts and stimulations in urban life.
- (6) Improved standards of health, education, and recreation.
  - (a) Health.
    - α) Better balanced diet; realization of the different requirements of the body in different occupations.
    - β) Use of the family budget for foresight and planning in making the most of the available income.
    - γ) Improved planning and management of cities and industrial towns: Gary, Port Sunlight, Garden City, Marcus Hook, etc.
    - δ) Improved housing: increased space, better light and air; better sanitation in factory and home.
    - η) The safety-first movement, guarding against accidents in factories and mines and on railroads and construction jobs.
    - θ) Increased clinical and general free medical assistance, especially for child care; guarding against occupational disease.

- c) Insurance against accident and illness; employer's liability insurance; state insurance schemes.
- (b) Education.
  - a) Better adaptation of education to the realities of modern urban life.
  - β) Extension of the average educational period and greater attention to native individual differences.
  - γ) Provision for adult education, both general and technical.
- (c) Recreation.
  - a) Modern change from outdoor to indoor forms of recreation and the need of provision for more outdoor recreation.
  - β) Growth of amusement through vicarious activities: professional sport and moving pictures.
  - γ) Need for study of recreational requirements and better provision for them by municipalities, states, and nation.
- (7) Provision of facilities for creative work in the leisure time provided by cutting down hours of work at monotonous trades. Individual variation in creative aptitudes may be cared for in spite of the increasing routinization and depersonalization of modern machine tasks.
- (8) Some proposed remedies for the increasing monotony and for the worker's loss of skill that are more or less in use at present are: periodic changes of work within the factory to provide interest and relief from monotony; increase of opportunities for technical training to open the way to higher positions for the more capable individuals; schools operated in factories and stores, public night schools, trade-union schools, etc.; allowing laborers a greater voice in control through various devices discussed below, such as entry into directorates, assistance in buying shares, etc.; cutting down of working time as discussed above, and the increase of equipment for avocations.
- (9) Improvements are conditioned upon the state of industry and the state of the particular unit of industry that is involved. Under conditions of severe competition, for instance, employing concerns are driven to seek the cheapest production methods. Only by concerted action—either through voluntary association or legal compulsion—can betterment be attained. Where there is not this severe competition the chance of improvement is increased. Improvement usually comes most rapidly in those sections of industry where the whole working force shares in control. Paternalistic welfare work has often been carried on, however, in industries little subject to competition and with high earnings.

## II. Raising the levels of living by the just apportionment of income.

1. The apportionment of income according to a plan intended to produce the greatest possible welfare for society: the minimum involved is the provision of necessities for all. The income of a social group or of an individual consists in all the forms of wealth that flow to it annually to pass through its hands or to be finally used up. These include food, clothing, machines, houses, luxuries; raw materials, packaged and finished goods; factories, warehouses, office buildings, etc. Income comes in fluid form as money and may be transformed into any of these goods forms at the will of the person or group to whom the money income flows. As money it is of no use; only as these other forms of wealth is it useful. Problems of the apportionment of income, therefore, concern not only the dividing up of money income; but also the dividing up of income in its more real forms. As a matter of fact an individual or a group may have a small money income but large receipts of food, clothing, or machinery, depending upon

the price they command in the market. Raising or lowering the value of money may vitally affect income. Or the control of price may affect it. In modern society income apportionment is determined in the markets; and takes place through a "pricing" process in spite of the fact that the money in which prices are always expressed is not in itself social income, *i. e.*, useful goods.

It is extremely difficult to make a moral decision as to which types of income are more justifiable. Modern social philosophy does not attempt to solve this problem any longer on the basis of the natural rights of man to possess wealth, but rather upon the basis of the social consequences that seem likely to follow from possession of it in particular cases. The important question becomes: what will be the effects upon society if one form of income is diminished or increased or if one individual or group is allowed to receive more or less?

- a) Differences of opinion exist about (1) the ability of society to control the apportionment, some economists believing that it takes place according to inevitable natural law; (2) the ends to be attained by control, some persons holding that submergence and hardship are beneficial to individuals for developing character and to the race for eliminating the unfit; and (3) the best machinery for control.
- b) We shall assume the possibility of control; we shall assume that the ends to be attained are the raising of the levels of living at least to the point where the struggle over income apportionment concerns itself with goods above necessities; and we shall assume that the best machinery for such control is to be determined by social experimentation and is probably of various highly technical kinds, being adapted to the control of a highly developed and extremely complex going system.

## 2. How income is apportioned.

- a) By the position of relative advantage gained by one party or another to price transactions.
  - (1) What gives advantages.
    - (a) The control of the supply of a wanted good or service (such as by trade unions, industrial monopolies, etc.), and the consequent power to force up the price.
    - α) The successful forecast of shortages or surpluses of supply and of the relative conditions of demand; the consequent obtaining of advance control in order to speculate on anticipated price changes.
    - β) The fortuitous or "lucky" placing of an individual or a group (such as an industry) in a favorable position (such as farmers when prices are rising, laborers during a war, manufacturers during "prosperity," cotton growers in the United States when there is a shortage elsewhere in the world, being born with the kind of ability most in demand during a certain generation, owning land on which oil is discovered, etc.). The business cycle and changing levels of prices together with inventions of new processes or machines probably furnish the greatest elements of fortuitous advantage (and disadvantage) in our system.
  - (b) The control of the demand for a product which producers desire to sell.
    - a) Less usual than the control of supply: occurs when marketing of a raw product or a service is wholly or partially monopolized as by market milk dealers, petroleum refiners, or meat packers; or when there is only a limited market for one's special training or abilities as in the case of a bricklayer, a carpenter, or an engineer, in a city with centralized control of the building trades, or an inventor of some appliance of use only in a mo-





gross income may be much reduced in importance, being fixed by custom or by long-time contracts. The main reason for the old classes was the fact that profits went wholly to capitalists; under any scheme for industrial democracy they are shared and the two old opposing groups join to gain power in the market to increase the gross income of the industry at the expense, if necessary, of some other industry, or of consumers.

- b) Certain industries form groups which share more or less heavily in the gross income of society on account of certain advantages or disadvantages.
  - (1) The character of the industry: the kind of good (luxury or necessity), whether subject to rapid fluctuation in supply or sudden change of demand.
  - (2) Whether capable of rapid adjustment to shifting price levels, conditions of prosperity or depression, or other social changes.
    - (a) Whether situated close (economically) to consumer or relatively far away.
    - (b) Whether "overhead costs" are large or small.
    - (c) Whether "turnover" is frequent or slow.
  - (3) The degree of cohesion among the individual units (businesses) of the industry: cohesion gives market power; it is largely determined by the physical conditions of the industry. For instance farmers, being scattered, naturally find cohesion difficult to attain; manufacturers and bankers naturally find it easy.
  - (4) The ability of the group to institutionalize its advantages: to get them adopted as firm social customs or written into statutory law. For instance, the habit of drinking milk and eating wheat bread; or the obtaining of tariff protection.
- c) Certain individuals share more or less heavily in income on account of having advantages or disadvantages.
  - (1) Superior or inferior native ability.
  - (2) Good or deficient training, schooling, or apprenticeship.
  - (3) Happening to belong to superior or inferior groups.
  - (4) Being in a position protected by discriminatory institutions.
  - (5) Happening to be in a favorable or unfavorable situation as some great socio-industrial change, beyond the individuals' control, takes place. It may be such a change as the making of war or peace, a shift in the business cycle, the coming into use of a new resource, or the development of a new country. The myth of the "self-made man."
4. The kinds of income: income may be classified according to:
  - a) Whether earned or unearned: whether due to forces outside the individual's control or to the individual's ability or energy.
  - b) The type of effort, if any, which obtained it: labor of hand or brain.
  - c) The source: the industry which produced it.
5. Suggested ways of improving the apportionment of income.
  - a) By the elimination of the group or individual monopolization of such fortuitous and unearned gains as those accruing from shifts in the general levels of prices, the shifting incidences of the business cycle, changes in population growth or location, variations in the demand for goods, the vagaries of the natural elements in production of raw and finished materials, war and peace, etc., etc.
  - b) By controlling the market in which relative advantages are gained: the regulation of market machinery or the control of prices.
  - c) By the strengthening of weak bargainers and raising their bargaining power to an equality with that of their stronger opponents: collective bargains between workers and employers, between consumers' coöperatives and sellers, between joint buying and selling agencies of small

businesses and larger firms—all these tend in this direction even without legislative assistance.

- d) By taking from a favored group or individual and giving to less favored ones: graduated income taxes, social insurance, and minimum wage laws are now used to accomplish this purpose.
- e) By removing the social protection given to recipients of fortuitous or unearned incomes which are not used to social advantage: super-income and inheritance taxes, removal of tariff protections and discriminatory regulations of all kinds.
- f) By attempting to estimate and reward individual merit: civil service as an example.
- g) By attempting to distinguish and estimate socially the most desirable types of activity (group or individual) and apportioning income in accordance with this social desirability, on the assumption that income is the incentive necessary to call out human effort and ought therefore to be furnished with a view to calling out the most needed types of effort; and that it ought not to be paid to any one (except social dependents) unless it serves this purpose.

### III. Raising the levels of living by the rational use of income.

1. The whole question of the disposal of the social income divides itself into first, a problem of choice, second, a problem of spending, and third, a problem of final consumption or use. To insure a real rise in the levels of life, it is not enough for an individual or a group to secure more money; the goods to be bought with it must be chosen wisely; the spending must be done efficiently; and the goods bought must be used carefully.
  - a) How money income shall be spent is a matter of individual choice: this in recent times has created a new obligation for the mass of people: the money economy of modern times increases the number and the social importance of the choices to be made by each individual.
    - (1) The preparation of the individual for the social duty of choosing. Choosing determines the direction of industrial activity and the wisdom with which it is done partially determines the level of living of the individual and his group. Individuals at the present time too often fail to discriminate; and little effort is given to training them in it, though much is given to tempting them to spend indiscriminately.
    - b) Even without actual increase in money income, one may often manage to live better by choosing wisely: by purchasing real rather than illusory goods, and by using wisely the goods decided upon.
    - c) To decide what are real and what are illusory goods, is often a moral problem which neither the economist nor any other scientist can solve unequivocally.
    - d) There are, however, certain common-sense canons of choice. Some choices are obviously good and certain wastes and misuses of wealth are as obviously bad.
2. Individual uses.
  - a) How individual choices are made.
    - (1) The felt lack.
      - (a) Back of this lies the whole psychology of individuality, including original nature and its superimposed individual habit patterns, which together form a sensitiveness to certain stimuli of the environment.
    - (2) The casting about for the means of supplying the lack.
      - (a) Sometimes found by reflection which defines the lack and the general means of filling it.
      - (b) Sometimes found in the habitual connections previously set up between the need, the stimuli, and the good.

- (3) The hitting upon a likely good to fill the lack.
  - (a) Selected from among those available or within the area of awareness. Perhaps stored up for some time and recalled from an old suggestion.
- (4) Mental manipulation and trying-out to discover the actual satisfaction the good promises.
- (5) The final act of choice: the settling upon one good, and the final rejection of alternatives.
- b) The rationality or irrationality of individual choice.
  - (1) Choice habits are formed when a felt lack has been successfully filled. There is thereafter a tendency to repeat the same choice.
  - (2) But all choice habits were consciously formed at some time, and may be reformed in whole or in part at any subsequent choice crisis.
  - (3) The danger from fixed choice habits comes from human reluctance to break up old habit patterns and create new ones. Usually we do it only when the old habit becomes notoriously unuseful.
- c) Ways of improving individual choices.
  - (1) By cultivating the mental flexibility that easily gives up a choice habit in whole or part: this is similar to the learning habit in the field of rational thought.
  - (2) By adherence to certain rules of behavior and tests of efficiency in choice, such as:
    - (a) Keeping in mind not only the single use of a single good, but the total scheme of uses of many goods into which it must fit. The attainment of variety and harmony in use makes every good the complement of all other goods in the whole scheme of an individual's consumption and raises that whole to the rational level.
    - (b) The removal of moral taboos that enter specific choices and affect particular goods; and redefining moral actions as those that do or do not tend toward the attainment of good ends: attitudes toward specific things then fall naturally into their true perspective as part of a whole body of conduct.
    - (c) The careful and conscious definition of the ends desired and the testing (actually or prospectively) of the good by its contributory qualities. The frequent raising of choice habits to the conscious level for redefinition and revision, using the most efficient mechanisms of foresight for the weighing of alternatives (especially the individual budget).
    - (d) Improvement in the methods of social suggestion, especially in commercial advertising.
- d) Ways of improving individual expenditures of money income.
  - (1) By adherence to some buying group as a family or a coöperative organization to secure the efficiencies of collective buying.
- e) Ways of improving individual uses of goods after the completion of choice and expenditure.
  - (1) By the creation of standards of complete use and by making waste reprehensible rather than praiseworthy.
  - (2) By taking the individual's appeal for social approval out of the consumption field and replacing it in the productive field. Yield social praise for acts, not possessions.
  - (3) By considering goods not as ends in themselves but as the means to strength and vitality in the future.
3. Collective uses.
  - a) Family uses.
    - (1) How family choices are made.
      - (a) By some individual of the family group.

- a) The importance of the housewife, who is usually in charge of most of the family expenditure.
  - β) Fitness and training of housewives for the task.
  - γ) Her special difficulties as a buyer.
    - (i) The housewife as a purchaser compared with the buying agent of an industrial corporation.
      - (a) Her buying done on a very small scale: often merely hand-to-mouth provision for the future.
      - (β) The lack of expert individual advice from technical experts such as is available to buyers for business firms.
      - (γ) The greater tenacity of customs in family consumption. In business there is a quantitative test to be had—lowered cost per unit of product—to which buying must conform, and which prevents the formation of rigid buying habits. In family life this test is lacking: the product—family welfare—is not so easily defined in quantitative terms. Habits may form which will be irrationally defended and will tend to persist in the face of changed conditions.
    - (ii) Effect of the changed character of modern family life.
      - (a) Families smaller and less cohesive; home less a permanent institution; education less a family function; industry taken out of the home.
      - (β) Spending somewhat less a family matter: tendency to place individuals of the family upon a separate footing except in strictly collective matters.
      - (γ) Persistence, however, of centering of important choosing and spending functions in the disbursing member of the family group. The larger share of choosing still done by the housewife.
- (2) Ways of improving family choices.
- (a) By improving the choices of its individual members and particularly those of the housewife.
  - (b) By better forecasting and the studied preparation of family budgets.
    - a) Expert determination of quantitative standards: studies of ideal budgets in terms not only of money but of food values, air spaces, thermal units, and the like. Determination of the proportions, at various incomes, that can most efficiently be spent for food, rent, clothing, light and fuel, education, recreation, health maintenance, insurance, etc.
    - β) Extended customary adherence to the expertly devised budget: the formation of a family budgetary habit. This at least makes family choice conscious and systematic, though it does not guarantee wisdom.
    - γ) The revision of customary family budgets: such revision ought to be frequent and guided by certain canons of judgment, such as:
      - (i) The physical, mental, and moral welfare of the individuals of the family, and the family as a group, living and functioning as a harmonious unit, each member of which is the complement of the others.
      - (ii) Social requirements: adaptation of family consumption to least-cost commodities (those furnished by nature most bounteously and with the least resistance to man's productive efforts); to reduction of social wastes and extravagances; to building up strong and desirable social institutions, governmental, educational, recreational, and the like.



- (3) Ways of increasing the efficiency of family expenditures.
  - (a) By family adherence to wider and stronger social groups of consumers: consumers' coöperatives.
  - (b) By governmental (municipal, state, federal) assistance in the administration of various kinds of insurance against the risks of modern life, provision of better facilities for savings, for timely credit assistance; and by governmental advice and assistance in matters of health and education.
- (4) Ways of increasing the efficiency of the family's uses of goods.
  - (a) By strengthening the family as a group: the planning of means to restore family bonds weakened by urbanism and by the taking of industrial and educational functions out of the home. The alternative to this is to recognize the passing of family life and to provide for the individual's adherence to some differently formed group, because only by group consumption can efficiency be had in the use of many goods such as the modern varieties of food, shelter, and recreation.
  - (b) By recognizing the family rather than one or two individuals of it as income receivers, consequently making the responsibility for spending a group responsibility. Where one member of the family earns income and the others spend it, there is a fruitful cause of friction and a source of inevitable carelessness and waste, especially among children.
  - (c) By the building up and maintenance of group standards of the complete, harmonious, and economical uses of goods. Approval for a simple, frugal régime of family life, rather than for conspicuous extravagance, the ability to spend, and the wasting of wealth.
- b) Industrial uses.
  - (1) The businesses of the industrial system as agencies for expending social income. This is not for ultimate but for intermediate consumption. Businesses use goods to make other goods, whereas individuals and families use them for final human purposes, for the re-creation of energy, for the purposes of art, and for wasteful uses as well. But nearly all the goods used by the modern individual or family have been shaped by industry for that use and they, or the materials from which they have been made, have been bought, sold and used many times in the process of shaping. The efficiency with which these business choices and uses are made is extremely important in helping to determine the size of the ultimate product of industry which is the income of the consumers as a whole. Businesses, like individuals, though for other purposes, may make wise or foolish choices and may use well or ill the goods they choose. Since their product is social income, society is legitimately interested in their efficiency.
  - (2) How businesses make choices.
    - (a) Old-fashioned rule-of-thumb method, highly irrational and intuitive, contrasted with the activities of the purchasing departments of modern businesses, with their exact planning and close articulation with other departments of the business.
  - (3) Ways of improving business choices.
    - (a) It would be difficult to suggest improvements upon the choosing methods of the best representatives of large-scale business: they are experimental, exact, and planned far ahead; what criticism is to be made is not to be made of purchasing departments but of managements that direct their activities sometimes to the getting of profits and to the hindrance of production, for, as we have seen, profits are sometimes gained not by producing but

by stopping or hindering production. Much also is to be done in bringing the bulk of American businesses up to the planning standards of its best representatives.

- (b) The chief failure is in the larger planning which involves the whole business just as the individual's chief failure is to make his total choices blend into a harmonious way of life. For instance, failure to foresee and prepare for business crises, and the following slackening of demand for the product, often results in overbuying and the accumulation of an unwanted surplus. This can only be avoided by better coördination among businesses, by better technique in the gathering and analysis of statistics, by closer forecasting of coming supplies and demands, and by sufficient control for the adaptation of the machinery of production to these changing needs.
- (c) There is often also a failure to weigh and experiment sufficiently with alternative choices and to make a scientific adaptation of the material needed, the process of manufacture, and the product wanted. This is not because of faulty method, but because the method has to be administered by some individual who carries over into his work the same habits which dominate his individual choices. This is an element of irrationality in an otherwise highly rational process.
- (4) Ways of increasing the efficiency of business expenditures.
  - (a) By closer affiliation with other businesses to form larger and more powerful groups for the exchange of information, for planning expenditures on a wider scale, and for securing the economies involved.
  - (b) By enlisting governmental assistance in coördinating, forecasting, and securing the economies of accurate spending.
  - (c) By the indirect reduction of expenditure per unit of product involved in all advances in production technique.
- (5) Ways of improving business uses of wealth.
  - (a) By all the advances involved in the reorganization of production on a more efficient basis. Production in this sense is consumption, and better production is the contribution of business to better consumption.

#### IV. Raising the levels of living through socio-economic planning for economic progress.

1. Economic life is only one phase of life and activity: for a rounded human career it has to be successfully incorporated into a complete system of life, comprehending all the areas of human activity, and functioning coördinately and harmoniously.
2. Modern life is inescapably social: so that the round of economic activities has to be fitted into a *social* system; but also the success of economic activities so conditions successful social life that the whole social scheme must be worked out also with a view to satisfying *economic* criteria. Opinion on the most advantageous scheme of organization for the socio-economic system as a whole may be roughly divided into:
  - a) The idea that the present system is on the whole a satisfactory scheme. The great majority of persons who hold this opinion admit certain weaknesses, inequalities, and injustices, but they believe that these are not sufficiently important to warrant any drastic changes with their attendant risks of destroying the good of the present order; that, on the contrary, they make necessary only some piecemeal regulation of "key industries," public utilities, etc.
  - b) The idea that the present system is entirely unworkable and needs

a thorough overhauling, amounting, in the minds of extremists, to revolution.

3. The fundamental quality of economic functions has usually seemed so plain that most *social* planning for the future—whether of conservatives who want to keep our present institutions relatively intact, or of radicals who want a complete overturn and a new beginning—has stressed most conspicuously the reorganization of the *economic* life and *has built up imaginary social systems strictly on a foundation of some newly projected economic order.*
4. We may consider profitably here the more conspicuous of these proposals for the future of the economic order, keeping in mind that they are primarily *economic*, but also that they imply certain political and other *social* changes.

(a) "The new freedom": completely competitive individualism; restoration of nineteenth century conditions—or rather the carrying out of the ideal formula of the nineteenth century, for competition never was so complete as to fulfil the individualistic ideal.

(1) Conditions implied by this proposal.

- a) Restoration of complete freedom of competition and the ruthless suppression of monopoly whenever it threatens competition.
- (b) Restoration and maintenance of individual bargaining: complete denial of rights to bargain collectively either as consumers, as purveyors of goods, or as workers with services to sell.
- (c) The maintenance of the rights of private property intact.

(2) Advantages claimed for competitive individualism.

- (a) Strong and efficient leaders have incentive to struggle to the top and to exercise and maintain their power.
- (b) Adequate scope for initiative and individual ability.
- (c) Prices are kept down by rigorous competition among sellers, and consumers are thus protected.
- (d) Satisfies human propensities for struggle: instincts of pugnacity and acquisitiveness, mastery and abasement.

(3) Difficulties claimed to prevent the successful carrying out of the system.

- (a) Recent changes in industrial structure and functioning, the development of the corporate form of business, and the universality of large-scale enterprise, make impossible the maintenance of a system fundamentally designed for small individually owned and managed units of business.

(b) Inefficiencies of production inevitable.

- $\alpha$  Duplication of plant and overlapping of effort.
- $\beta$  Lack of any system of coördination among businesses or industries makes overproduction or underproduction inevitable and prevents the adjustment of production to demand.
- $\gamma$  Makes possible the sharing in income of many individuals who perform no services and who use income in wasteful ways.
- $\delta$  Implies the development of an autocratic system of management that will not be tolerated by modern workers.

b) Continuance of the present "system"; involves some piecemeal regulation of "key industries" and public utilities, some legislative amelioration of labor conditions, some "protection" of various industries from foreign competition, and some suppression of monopolies—as "conspiracies in restraint of trade."

(1) Advantages claimed for the continuance of the present system.

- (a) Enables society to maintain the advantages of the competitive ideal and to escape the disadvantages—the wastes and inefficiencies—that would be involved in it.

(2) The disadvantages claimed for the continuance of the present system.

- (a) Avoids the problems of social planning and the need for reorganization and wants merely to maintain a *status quo* that has already failed to meet social requirements.
  - (b) Would involve a continual lack of balance among contending forces. One group would always have the advantage over others, as it now does, without need or reason.
  - (c) Would leave economic society at the mercy of those blind forces which are now wrecking it, the evidences of which appear for instance in recurring depressions, trade rivalries, the high cost of living, and widespread poverty and misery.
- c) "Full collective bargaining."
- (1) Recognition and encouragement by the state of organization on the part of employers and workers.
  - (2) The National Industrial Council: a national council to secure joint action between representative organizations of employers and workers, to prevent and adjust industrial disputes, and to serve as official consultative authority to the government upon industrial relations.
  - (3) Machinery of organization within each industry: the Whitley scheme.
    - (a) Joint standing industrial councils (national) composed of representatives of employers and employed in each industry.
    - (b) District councils: representative of trade unions and employers' associations in each district.
    - (c) Works committees: representative of management and workers in particular plants.
  - (4) Functions of works committees, district councils, and national councils.
    - (a) To deal with questions of hours, wages, and conditions of employment.
    - (b) To provide security and continuity of earnings and employment.
    - (c) To provide for technical education, training, and industrial research.
    - (d) To deal with proposed legislation affecting the industry.
  - (5) The advantages and limitations claimed for schemes for "full collective bargaining."
    - (a) Advantages claimed.
      - a) Enables workers—the vast majority of the population—to share in the control of industry.
    - (b) Disadvantages claimed.
      - a) Does not constitute a plan for the placing of individual industries in their proper social settings and for keeping them properly subordinated to a general scheme.
      - β) Does not recognize the consumer function and offers no control of the market or prices where a large part of the present difficulty lies.
- d) The coöperative system.
- (1) The object of coöperation: the elimination of the managing employer and of private profits; general policy settled and risks assumed by coöperators as a body; ownership and control vested in a body of coöperating equals.
  - (2) Coöperation in retail and wholesale trading; success of the Rochdale stores and the *Schulze-Delitzsch* societies.
  - (3) Coöperation in production. Comparative lack of success in this field.
    - (a) Character of operations fundamentally different from those of retail trading and banking.
    - (b) Difficulty of carrying on production on large scale, because of lack of capital.



- (c) Failure to secure capable leaders.
- (4) Coöperative credit societies.
- (5) Coöperation as a scheme for social regeneration shares the disadvantage of schemes for full collective bargaining: it is partial and offers no solution for many of the most pressing problems of industrial society.
- e) Government ownership of great public service industries (nationalization); control by joint boards representing workers, managers, and public.
  - (1) The proposed organization of the English coal-mining industry; the Sankey report.
    - (a) State purchase of coal royalties and coal mines.
    - (b) Control by councils of workers, consumers, and technical experts, under the general supervision of a Ministry of Mines; the National Mining Council, District Mining Councils, and Local Mining Councils.
  - (2) The Plumb Plan for railroad reorganization in the United States.
    - (a) Government purchase of all railroad systems, on basis of capital invested.
    - (b) Administration.
      - a) Operation of roads by a board of fifteen directors, five representing the public, five the managers, five the classified employees.
      - β) Division of surplus between government and employees, provided that if surplus exceeds a certain percentage of the operating revenues, rates must be reduced; deficits to be met by government.
  - (3) The present status of the Sankey scheme and the Plumb Plan. Significance of these proposals. Advantages and disadvantages: full social control *vs.* "red tape."
- f) Collectivism: ownership and control of all industrial undertakings by the state; state socialism.
  - (1) The general principles of socialism.
    - (a) Abolition of private property in the means of production (land and capital), with retention of private property in articles of personal use. Collective (state) ownership of means of production.
    - (b) Administration of a collectively owned industrial system through a democratic political organization.
    - (c) Abolition of wage system as at present constituted.
  - (2) The basic doctrines of Marxian Socialism.
    - (a) The materialistic interpretation of history. All human phenomena can be explained in terms of the underlying material facts of life. Irresistible economic forces shape human history.
    - (b) The law of the concentration of capital. Capitalistic undertakings tend to become larger and larger; small competitive enterprises tend to disappear, and to be replaced by great trusts.
    - (c) The class war. Increasing concentration of capital leads to division of society into two great classes, the capitalist class and the wage-earning class—*bourgeoisie* and proletariat. Between these two classes a struggle will go on until all wage earners combine, locally, nationally, and internationally, and take over the ownership and control of land and capital for the common good. View of Marx that this process of concentration of capital, increasing misery, class war, and ultimate social control is natural and inevitable, a working out of irresistible economic forces. The Communist Manifesto. The great influence of Marx on socialistic thought.

## SUMMARY AND OUTLINE

- (3) Other types of socialistic doctrine; the Fabian policy of securing reforms and collective ownership gradually, by the use of constitutional methods; the Socialist Party in politics.
- (4) The socialist program today; arguments advanced for a socialistic organization of industry, and objections to it.
- g) Syndicalism: ownership and control by the workers in each industry.
  - (1) General principles of syndicalism.
    - (a) Organization of industry by the workers as producers, not as consumers. The industry as the unit of ownership and control; ownership by organized labor.
    - (b) Substitution of industrial (direct) action for political action; boycott, union label, strike, and sabotage. The general strike the chief weapon.
  - (2) Syndicalism as a working principle of industrial organization; advantages claimed for it and objections to it.
  - (3) Syndicalism in practice.
    - (a) French syndicalism: the C.G.T.
    - (b) American syndicalism: the I.W.W.
  - a) Their principles.
    - (i) Class conflict. "The working class and the employing class have nothing in common. Between these two classes a struggle must go on until the workers of the world organize as a class, take possession of the earth and the machinery of production, and abolish the wage system." (Preamble of the I.W.W. Constitution.)
    - (ii) Abolition of the wage system.
    - (iii) Organization on industrial instead of craft lines.
      - (a) The doctrine of working-class solidarity; the "One Big Union."
      - (b) The organization of the unskilled together with the skilled; opposition to labor aristocracy.
    - (iv) Accomplishment of ends by direct industrial action.
    - (v) Ultimate complete control of the industrial system by the workers; control of the political system will necessarily accompany industrial control.
  - β) Method and tactics of the I.W.W.
    - (i) Direct action; the general strike.
    - (ii) Free-speech fights as means of propaganda.
- γ) The I.W.W. today.
  - (i) Membership.
    - (a) Confined largely to migratory unskilled workers in textile, steel, lumber, mining, farming, railroad construction, and marine transportation industries: a relatively unstable group, apt to be weak collectively except in times of crisis.
    - (b) Numerical strength: not over 60,000 members at present. Actual influence not measured by paid-up membership.
  - (ii) Weaknesses of the I.W.W.
    - (a) Inability to maintain stable membership.
    - (b) Membership unfitted for constructive endeavor.
  - (γ) Organic weaknesses due to internal conflict: centralization of power *versus* decentralization; constructive industrial unionism *versus* the revolutionary ideal of uncontrolled agitation, "guerrilla" warfare against authority.
  - (δ) Financial weakness.
  - (iii) The future of industrial unionism in the United States; the agitation for industrial unionism in the A. F. of L.; dual unionism *versus* "boring from within."

h) Guild socialism: a compromise type of organization, standing between collectivism and syndicalism.

(1) General principles of guild organization.

- (a) Ownership of means of production by the state, as trustees for the community.
- (b) Management of industrial undertakings by guilds or workers in each industry, acting also as trustees for the community; payment of tax or rent to state.
- (c) The Guild Congress: a body consisting of representatives of all national guilds, and having supreme authority in industrial matters.
- (d) Parliament to retain supreme authority in political matters; Parliament to represent consumers.
- (e) Joint committee of Parliament and Guild Congress to deal with conflicts arising between the two bodies; joint committee to reconcile interests of producers and consumers.
- (f) Adjustment of prices by joint committee.
- (g) Adjustment of pay within each industry by the national guild controlling that industry.

(2) Guild socialism as a possible working principle; advantages claimed for it; objections to it.

5. Criteria for the judgment of these proposals.

- a) Do they propose a series of institutional changes which promise a better working economic order, in which the processes of production are made more efficient, in which the apportionment of income is more just, and in which our uses of goods are more rational?
- b) What are likely to be the secondary effects so easily overlooked: what other adjustments, besides those contemplated in the scheme, will become necessary; and will these eventuate in desirable or undesirable situations?
- c) Are they flexible? Do they propose a static set of institutions, fixed once for all; or do they offer a scheme which is inherently modifiable as changes occur which render useless in whole or in part the institutions that were once useful?

**D. Conclusion.**

I. General tendencies in the United States.

II. Attitudes toward the future.

III. The need of new moral controls.

IV. The responsibilities for change passing continually from age to youth.





# INDEX

- Absentee ownership, problems of, 291, 294
- Accidents, economic waste of, 46; and safety campaigns, 242
- Adamson Act, 554
- Administrations, personnel, 282
- Advertising, expenditures, 288; and the consumer, 417; and choice, 468; as habit-influencing agency, 492
- Agricultural, employment of children, 27; of women, 26; production, 122; revolution, 141, 143; hazards of production, 149; and machines, 155; old and new methods compared, 155; marketing, 172
- Agricultural products, distribution of, 175; sorting and grading, 179; and freight rates, 178; standardizing, 180; government quotations, 184
- Agriculture, number of persons engaged, 124; conditions for success in, 134; and rainfall, 139; advancement of, 141; revolution of, 141; U. S. Department of, 150; new methods, 150; and coöperation, 169; coöperative insurance, 170; and marketing, 172; and transportation, 174; and storage, 177; and freight rates, 178; pooling freight rates, 184; market quotations for, 184; progress in, 122
- Aim of working life, 132
- Air currents, utilizing energy of, 207
- Alloys, steel, 220
- American, economic situation, 587; economic philosophy of despair, 589
- American Federation of Labor, composition, 510; growth, 512
- American, wealth and art of living, 104
- Amusements, change in country, 74; town and suburban, 83
- Animals, efficiency as food converters, 487; relative efficiency in converting vegetable matter to meat, 488; products as food, 490; products and milk as food, 490
- Anti-trust legislation, 312, 315; and Department of Commerce, 312
- Apartment houses, growth of, 375
- Apportionment of wealth, attitude of society, 435; by income tax, 436
- Atomic energy, 209
- Automobile, and industries contributing to manufacture, 303
- Average yield, per acre of European countries in per cent of average yield in U.S., 127
- Babbitt, Sinclair Lewis, on urban life, 90
- Bank, credit, 334
- Banking, function of, 338; kinds, 338; and business control, 339; and allocation of capital, 339; systems, old and new in U.S., 340
- Bargaining, group, 420
- Bentham, Jeremy, Utilitarianism, 397
- Biological experimentation, 140
- Bonds, corporation, 293
- Bread, manufacturers' profit and varying expenses, 415
- Breeding, scientific, 145; plant and stock, 144; methods of, 147
- British Labor Party, 566; and socialism, 579
- Budgets, and consumption, 467; family, 475
- Business control, military type, 275, 295; functional type, 276; and marketing, 286; planning for future, 286, 287; and labor, 294; barometer and thermometer of, 296; Dennison Manufacturing Company, 298; American Radiator Company, 298; and banking, 339
- Business, coöperative form, 251; technique of, 284; marketing in, 285; and competition, 286; advertising, 288; efficiency of big, 483; statistics of, 484; and government regulation of eighteenth century, 499
- Business cycle, 320; and unemployment, 322; phases of, 321; explanation of, 323; analysis of, 324; different explanations, 326; suggestions for elimination, 328; and income, 410

- Business forecasting, technique of, 295; barometer of, 297, 484  
 Business organization, various forms, 312
- Cafeteria, coöperative, 529  
 Capital, accumulation, for 1924, 115; issues, 1924, 116; and labor, 421  
 Cast-iron plows, 1825, 155  
 Cattle breeding, methods of, 145  
 Cement, amount produced in United States, 224; for building construction, 224; manufacture of, 273  
 Charity, and government redistribution of wealth, 433  
 Child labor, in rural communities, 27; in industry, 49, 365; legislation, 365  
 China, land shortage in, 136  
 Choice, in use of income, 449; canons, 452; how made by individuals, 453; steps in individual choice, 454; of food in typical American restaurant, 458; complexity of, 456; and fixed habits, 459; improvement of individual, 463; and social approval, 468; and advertising, 468  
 City life, degeneration of family, 480  
 City planning, 371; and air, light, and space, 372; Washington, D. C., 373; physical improvement, 374  
 Citrus Fruit Growers, of California, 181  
 Civilization, compared to primitive culture, 110; under socialism, 569  
 Civil service, and income-apportionment, 443  
 Class struggle, of bourgeoisie and proletariat, 564  
 Clayton Act, 312, 441  
 Climate, and farming, 139; effect on crops, 140  
 Coal, reserves, of world, 206; formation of, 209; by-products of, 219; products derived from, 226; fields in United States, 556; statistics of industry, 556  
 Code of life, revaluation of, 466  
 Cohesion, of groups, 425  
 Collectivism, 509; and socialism, 559  
 Collective bargaining, development, 509; kinds, 514; full, 515; forced, 516  
 Combination, tendency in business, 310; possibilities, 310; "vertical" and "horizontal," 313  
 Comfort, definition of, 66; in primitive life, 66; in modern civilization, 67; level of city dwellers, 76; group social life, 84  
 Comfort-level, of urban life, 90  
 Commodity coöperative, 181; scheme of organization, 181  
 Community centers, rural, 195  
 Company towns, 371  
 Comparison, old and new methods in agriculture, 155; of retail, wholesale, and agricultural prices, 424  
 Compulsory arbitration, of labor disputes, 418; obstacles, 519  
 Concrete, as a building material on the farm, 161  
 Conditions requisite for workers in industry, 231  
 Consolidated schools, 172  
 Consumer, and seller, 415  
 Consumers' coöperative, 469, 478; characteristics of, 533; in Europe, 540; advantages, 541; policies of, 543  
 Consumption, of human foods in Germany and U.S., 128; function of, 466; and a budget, 467; end of, 470; symphonie of goods, 463; intermediate, 482; guide to national habit of, 489  
 Control, of pests and diseases, 152; of business, 275; of supply, 406, 410; of demand, 410  
 Coöperative, insurance in agriculture, 170; ownership of machinery, 170; marketing, 171, 181, 183; veterinary service, 171; commodity, 181; Citrus Fruit Growers of California, 181; business, 251; form of business and its growth, 251; housing, 369; consumers, 469; movement, 523; classification of enterprises, 525; consumers', 526; history of movement, 526; movement in United States, 526; movement among farmers, 527; restaurants, 529; boarding and rooming houses, 531; producers, 535; credit associations, 536; extent of movement throughout world, 539  
 Coöperation, in agriculture, 169; extent of, 182; benefits of, 183; compulsory in Queensland, Australia, results, 183; in family expenditure, 478; meaning and significance, 523; in United States, 524; classification, 525; producers, 531; extent of movement in world, 539; recommendations of Federal Trade Commission, 544; significance of movement, 545  
 Coördination, of businesses and industries, 302; and the middleman,

- 305; other agencies, 309; limitation of agencies, 310
- Corn, as human food, 488
- Corporate production, technique of, 164; manufacturing business, 285
- Corporation, 261; advantages of, 262; structure of, 263; business side, 285; control of operation and capital, 290; function of directors, 291; and relation of stockholders, 292; and financiers, 292; securities of, 293
- Cotton, processing of, 216; distribution of cotton and cotton products, 306
- Craft unions, 510
- Credit associations, coöperative, 536; development and characteristics, 536
- Crops, rotation, 143; value of, 143; reason for, 144; choice of, 166
- Culture, obstacles to, 88; primitive and modern, 110; economic policy toward, 433; improved standards, 387; under socialism, 570
- Cumulative process of wealth-making per capita, 12
- Currency, flexibility, 337
- Darwin, Charles, and progress, 395; his theory and economic individualism, 501
- Death rate, among poor, 46
- Demand, control of, 410
- Development of man, factors of, 201
- Diesel engines, 212; and steam engines, 213
- Diet, modern, 69; in U. S. and Germany, 127; vegetarian, 143; improvement on farms, 190; regional and national habits of, 487; national, 488
- Diminished production in agriculture in U. S., 124
- Directors, of corporation, 291
- Discrimination, against social groups, 417
- Disease control, in agriculture, 152
- Distribution, of agricultural products, 175; of cotton and cotton products, 306; of income, 391; of wealth, and government regulation, 399; of income, and group bargaining, 419; of wealth and government non-interference and directing, 435
- Divine right, theory of, 394
- Division of labor, 256; application of, 276
- Dollar, shifting value of, 318
- Douglas, Hitchcock, and Atkins, on levels of well-being, 56
- Dreiser, Theodore, *Color of a Great City*, description of oil refinery, 41
- Economic, practice, 4; progress and riches, 104; position of U.S. in world, 117; benefits of coöperative marketing, 183; formulation of policy, 430; goods, and "thrift" and "abstinence," 466, 469; plans of policy, 493; defined, 495; status, and political and social status, 496; system, and political and social influence, 496; conditions of further advance, 593; individualism, 501
- Economics, theory of Adam Smith, 4, 248; value of, 5; point of view, 6; and revolutionary doctrines, 395; and individualism, 499
- Economy, of land and meat consumption, 127
- Education, in rural communities, 75, 193; change in, 354; in industrial society, 385; vocational, 386; expenditure, 479
- Efficiency, progress in, 110, 111; agricultural, in Europe, 125; ideal, 131; rural production, 134; of transportation, 138; engineering on the farm, 165; of business expenditures, 484; of animals as converters of vegetable food to meat, 488; of combination, 254
- Electricity, on the farm, 161; and power from decomposition of water, 208; for power, 217; production of, 217; long-distance transmission, 219; for heating, 220; for lighting, 220
- Elements, of plant growth, 144
- Employers' associations, 515
- Employment, of children, 27; of women in industry, 49; factory, 1913-20, 322
- Endowment, and government, 435
- Energy, of the sun, data, 206; of tides, 206; from decomposed water, 208; from interior of earth, 208; from the atom, 209; transformation of sun's energy, 209
- Engines, internal combustion, 212; Diesel, 212; comparison of Diesel and steam, 213
- English, plan of adjusting labor disputes, 521; Coal Mining Industry, Sankey Report on, 555
- Entrepreneur, 358

- Eugenics, 130, 131  
 Europe, agricultural efficiency, 125; land pressure, 135  
 Evolution, of the reaper, 156; theory of, 395  
 Existence, plane of economic, 8  
 Expenditure, of incomes on comfort level, 79; for emulation of rich, 82; efficiency in business, 484; and taxes of national income, 400; on education, health, and recreation by New York City, 469  
 Experimental attitude, in economics, 594  
 Explosives, use of, 221
- Factors, of economical size of a farm, 167; of locating manufacturing plant, 265; weighing importance of, 269; of development of man, 201  
 Factory management, scientific, 279; contributions, 280  
 Factory, planning, 270; employment, 1913-20, 322  
 Family budget, 475; revision of, 477  
 Family, expenditure, increasing efficiency, 478  
 Family group, change, 472; degeneration of, 480; rural, 26  
 Family life, rural, 26; city, 480; change in, 354  
 Farm acreage, in U.S. and Europe, 135; factors determining, 137  
 Farm buildings, improvement of, 160  
 Farm homes, devices for, 191  
 Farm life, 29; social life of, 29; of pioneer, 10; variety of work, 70; advantage to children, 71; and the automobile, 73; education in, 76; revolution of, 139  
 Farm production, increasing, 134; and marketing policy, 184  
 Farm work, variation in, 71  
 Farmers' business organizations, 525  
 Farms, factors determining size, 136, 166; efficiency size, 137; sources of power, 157; standardization of cost and accomplishment, 165; records on, 167; layout of, 167; hours of work, 188; motorcars and tractors, 189; water in house, 192; management of, 142  
 Fascisti, 574  
 Federal Farm Loan System, 170  
 Federal Reserve Act, 1913, 340  
 Federal Reserve Bank, rediscount of commercial notes, 1919-22, 355; flexibility of note circulation, 1919-22, 337, 340; Districts, 341  
 Federal Reserve Board, 341; and Prof. Kemmerer, 342  
 Federal Reserve System, 340  
 Federal Trade Commission, Act, 312; recommendations for coöperation, 544  
 Finance and agriculture, 170  
 Fisher, Irving, 320  
 Fisher plan, 337  
 Fixed habits, and prices, 416; advantage to sellers, 416; and choice, 459; economy of, 460  
 Flapperism, 474  
 Food, effect of transportation on, 68; modern diet, 69; habits, 487; efficiency of animal, 487; value of four kinds in calories on acre basis, 490; guide in use of, 492  
 Ford's River Rouge plant, 222  
 Fortuitous gain, 409  
 Fortunes, of richest men in America, 98  
 Free competition, public policy toward, 434; and regulation in twentieth century, 398, 503  
 Free land, 123  
 Freight charges, pooling in agriculture, 184  
 Freight rates, proportion of value of agricultural products, 178  
 Friday, David, on capital accumulation for 1924, 115; well-being in America, 589  
 Future, population and land requirements, 129
- Garland, Hamlin, rural social life depicted, *Son of the Middle Border*, 30  
 George, Henry, 245  
 Georgia, Children's Bureau, report of, 20; lack of medical facilities in, 21  
 Geyser, Old Faithful, 208  
 "Giant power" system, 218  
 Girls, training for home, 473  
 Golden Age of Greece, and modern comfort, 110  
 Gold standard, 333  
 Goods, and money, 244; contrast of engineer's point of view and business point of view, 249; income, 404; elastic and inelastic, 422; conduct in use of, 467; use of, 469; collective use of, 471  
 Government, market quotations, 184; regulation and ownership, 316; advantages of regulation, 317; and



- reapportionment of wealth, 400; and fixed prices, 416; and charity, 433; and private charity and endowment, 435; apportionment of wealth, 436; regulation of reapportionment of wealth, 440; and production, 441; and distribution, 442; distribution of its income, 443; policy of reapportionment, 443; regulation in eighteenth century, 499; theory in eighteenth century, 500; regulation of competition, 501; ownership, 548; regulation, 551; regulation of rates of public utilities, 552; and exercise of "police power," 552; operation, 553; regulation of arts and sciences, 568
- Government ownership, and public opinion, 548; fields where practicable, 548; and railroad labor disputes, 554; and strikes, 554; of coal industry, 550, 556; of railroads, 550, 552; and mechanism of, 557; and socialism, 559, 560
- Grading, of agricultural products, 179
- Groups, bargaining, 420; affiliation of, 421; shifting, 421; and price adjustment, 423; of superior cohesion, 425; relative abilities in institutionalizing advantages, 426; gaining membership in, 428; and buying, 469; and reactions of choice, 471; change in family, 472
- Guild socialism, 576; plan of, 577; obstacles, 577
- Gunnite, cement, 224
- Habit, and choice, 454; and price determination, 407, 416; fixing, 460; resisting, 461; cultivating learning habit, 463; of use, 485; guide to consumption, 489
- Haldane, Prof., author of *Dædalus*, 208; prediction in *Dædalus*, 129
- Hansen, Alvin H., wages, 120
- Health, minimum standard of, Philadelphia, 61; improved standards, 369; public service, 378; insurance, 380; state boards, 380
- History, of coöperative movement, 526; materialistic interpretation of, 563
- Hobson, Prof. J. A., on productivity and source of well-being, 247; socialism in Great Britain, 579
- Homes, country, 67; change in, 68; improvement in country, 191
- Home life, change in, 354; degeneration of, 480
- Horses, for hauling power, 203
- Hours of work, in city trades, 257; in domestic and personal service, 358; problems of reducing, 358; and production, 359; and overhead, 359; of work on farm, 188
- Housekeeping, change in duties, 354
- Housewife, position in the city, 473; as a buyer, 474; economic position, 475
- Housing conditions, improving, 370; alternative possibilities, 375; trend, 376; proportion of families living in own homes, 377; and community housing, 377
- Improving cattle, by grading and by selection, 147
- Improving conditions of workers, 132
- Incentive to trusts, 248
- Income and adequacy of diet, 16; adequacy of clothing, 17; distribution in U.S., 59, 97; in cumulative percentages, 60; family, U.S. Bureau of Labor Statistics, 60; apportionment of national, 78; expenditures, 79; sources of increase, 98, 99; distribution of, 391; distribution and the medieval church, 394; and expenditures and taxes, 400; definition of, 402; forms of, 402; money income and goods income, 404; net, 408; and business cycle, 410; fortuitous, 409; unearned, 411; use of, 412; and productivity, 413; and bargaining power in market, 414, 419; and taxes, 417; and group bargaining, 419; advantages of industrial groups, 422; variation of, 427; tax, 438; apportionment by Civil Service, 443; use of, 449; social, 483; our national, 589
- Increase in size of business units, 251
- Increasing yield per acre, 125
- Index, Harvard business, 297; American Telephone and Telegraph Company, composite of general business, 327, 328
- Index numbers, of real wages in capital cities, 120; of relative increase in wealth in U.S., 122; of yield per acre in U.S., 123; of, wholesale prices, 246; of commodities, 114; of employment, in Massachusetts, 114; of business, 297; of commodities, and shifting value of the dollar, 320

- Individual choices, improvement of, 463
- Individualism, since war, 438, 481; meaning of, 498; development, 498; and Locke, Rousseau, Jefferson, Adam Smith, 498; in third decade of nineteenth century, 499; and Darwin's theory, 501; modern, 503; opposition to, 504; and organized labor, 506; development of mean, 406
- Industrial, revolution, effect upon agriculture, 164; research, 225; combination in United States, 253; combination and government policy, 254; coördination and control, 302; democracy, 329; incentives, 397; uses, 481; consolidation and individualism, 505; unions, 510; intervention in disputes, 517; schemes for adjusting disputes, 521
- Industrial Workers of the World, 574
- Industries—effect on workers, 40; accidents, rates of, in United States, 46; in tenement district, 52; and agricultural revolution, 142; socialized, 235; local concentration, 268; types of, 271; business side, 285; pig iron, 298; contributing to manufacture of an automobile, 303
- Infant mortality, in rural districts, 23; and wages, 47
- Insect control, 152
- Insurance, schemes for illness, accident, and old age, 379
- Interdependence and coördination, 257
- Internal combustion engines, 212
- Investment, turnover, 425
- Irrigation, 140, 150
- Isolation, of rural life, 188
- Joint interests, "Big Five," packers, 252
- Kansas Industrial Court, 418
- Kentucky, mountain region and nutrition of children, 16; inadequacy of clothing in, 17
- Labor income of the farm, definition, 166
- Labor, turnover, 360; legislation, 361; child, 363; settlement of disputes, 517; compulsory arbitration of disputes, 418; disputes, and statistics, 519; agencies for adjustment of disputes, 521; seasonal, of man and horses, 362
- Laissez-faire* policy, 311
- Land, free, 123, 135; requirements of future, 129; shortage, 136; nearness to market, 138
- Landmarks in technique of production, 112
- Layout of a farm, 167
- Legislation, anti-trust, 312; labor, 362; minimum wage, 366; and price fixing, 416
- Leguminous plants, and soil restoration, 144
- Level of living, raising, 107
- Lewis, Sinclair, *Babbitt*, on urban life, 90; economic philosophy, 590
- Life, standards of, 6; measure of, 54; raising, in 19th century, 229
- Limitation of effort, 251
- Literature of social problems of rural life, 197
- Little, Arthur D., commercial research, 227
- Local concentration of industries, 268
- McCormick, Cyrus H., and Obed Hussey, patenting of reaping machine, 155
- Machinery, in agricultural production, 123; on the farm, 155; co-operatively owned, 170; vs. hand power, 215
- Machines, and individualism, 505
- Macklin, Prof. Theodore, on economic benefits of coöperation, 183
- Making goods and making money, 244; contrast of engineering point of view and business point of view, 249
- Man, and physical science, 199; as energy for motive purposes, 213, 214; vs. machines, 214
- Management, farm, 142; of manufacturing, 274
- Manufactured commodities, increased production of, 113
- Manufacturing plant, factors of location, 265; importance of factors for locating, 269
- Manufacturing plant, location factors, 165; continuous, 273; management of, 275, 276, 277
- Marketing, coöperative associations, 171; facilities for agricultural products, 172; and sorting and grading, 179; by freight, 178; extent of co-operative, 182; aim of, 181; in business, 285
- Marketing facilities, development of, 174

- Markets, and choice of crops, 166; definition of, 307; getting advantages in, 413, 416; and determination of price, 407; and transportation, 138
- Marriage in rural life, 24
- Massachusetts index of employment, 114
- Material comfort and culture, 111
- Marx, Karl, 245; doctrine of, 563; theory of materialistic conception of history, 563; and law of concentration of capital, 564; and class struggle, 564
- Mechanical improvements in the home, 351
- Media of Exchange, 332
- Medical facilities, lack of, in Montana, 22; in Georgia, 21
- Mendel, Gregor, on breeding, 145
- Mercantilism, of eighteenth century, 501, 502
- Methods of breeding, 145
- Middleman, marketing system, 305; and coördinating function, 306, 307; difficulties of system, 307; function in local situation, 308; advantages of, 425
- Milk, compared with other products as a food, 490, 491
- Minimum wage legislation, 366
- Mitchell, Prof. Wesley C., analysis of business cycle, 324
- Modern dairy barn, 160
- Money, 317; economy, 332; quantity theory, 337; function of, 403; income, 404
- Monopoly, 246; regulation of, 316; and control of supply, 406; and policy of the state, 581
- Montana, housing in rural districts, 18; medical facilities in, 21; material mortality of, 23; housework in, 25
- Mortality, of production, 470
- Motorcars, on farms, 189, 190
- Motors, mechanical, 210; steam and water, 211; internal combustion, 212
- Mountain sections, household conveniences, 186
- National banks, increase in number, 421
- National Bureau of Economic Research, hours of work, 357; our national income, 589
- National Industrial Conference Board, standard of living, 57
- National Industrial Council, 521
- National Liberal Federation, of Great Britain, resolution, 581
- National Parks, 382
- Nationalization, of coal mines, 556
- Nature, and production, 109
- Nearing, Scott, economic outlook, 591
- New crop plants, 150
- New England, soil destruction in, 135
- Newspapers, degeneration of, small-town, 195
- New York, soil destruction in, 135
- Nietzsche, theory, 502
- Occupations, highly paid, 101
- Ohio, soil destruction in, 135
- Oil industry, conditions in, 41
- Organized labor and limitation of output, 251
- Our Cafeteria, coöperative, 529; growth of, 530
- Overhead, and reducing hours of work, 359
- Owen, Robert, early socialist, 561
- Parks, National and State, 382
- Partnership, 261
- Patten, Simon N., philosophy of prosperity, 589
- Personnel, administration, 282; department, 282; contribution, 283
- Pest control, 152
- Petroleum, production in U.S., 209; formation of, 209
- Philosophy of industry, 398
- Pig iron industry, production, 298; use of, 482
- Pioneer life, 10; in literature, *Son of the Middle Border*, 10; hardships of, 11; Mr. Garland, 13
- Plants, new plants, 150; breeding of, 148
- Playground and Recreation Association of America, 384; municipal, 383
- Plumb Plan, 554
- Political, definition of, 495
- Police power, of state, 316
- Pooling, of freight charges, 184
- Population, increase of, 1920-23, 113; limiting, 130; pressure on food supply, 145; urban and rural, 185
- Potato growing, acreage of, 426
- Poverty, rural, 8; meaning of, 8; in literature, 9; in pioneer times, 10; and ignorance of hygiene, 20; urban, 37; measure of, 54; and public attitude, 432; per cent of people in this condition, 593

- Power, on the farm, 155; source on farm, 157; discoveries of new sources, 199, 202; resources of the world, 204; from decomposition of water, 208; mechanical application of, 213; systems, 217; distribution systems, 217; surveys, 218; sources, surveys of, 205
- Price levels, shifting of, 318; controlling factors of adjustment, 423
- Prices, determination of, 407; fixed, and profit, 415; and fixed habits, 416; and legislation, 416; comparison of retail, wholesale, and farm, 424
- Private ownership and strikes, 554
- Private property, 395; public attitude, 431; and government confiscation, 439
- Problems, of agricultural production, 125; of progress, 131
- Producer and position in market, 413
- Production, effectiveness of modern methods, 107; under primitive conditions, 109; efficiency of, 110, 111; landmarks in technique of, 112; increase per worker, 114; increase per capita, 114; rates of, 115; in agriculture, 122; per farm worker, 125; possible results, 131; increasing by efficiency, 199; pig iron in U.S., 202; cycle at Ford's River Rouge plant, 222; increasing urban, 229; and voluntary effort, 230; limiting, 247, 248; and tariff, 249; of U.S. and corporate business, 251; and reduced hours of work, 359; morality of, 470
- Productiveness and industrial combination, 253
- Productivity and income, 413
- Products derived from coal, 226
- Progress, and riches, 104; in agriculture, 122; balancing industrial and agricultural progress, 130
- Public policy, formulation of, 431; and private property, 431; and acquisition of wealth, 431
- Quantity theory of money, 336
- Queen Elizabeth, edicts of, 499
- Radio and rural culture, 197
- Railroads and the farmer, 176
- Rainfall, and agriculture, 139; effect on crops, 140
- Ratio of population to crops, 124
- Real wages, in U.S. since 1820, 119; index numbers in capital cities, 120; definition of, 121
- Reclamation of land, 152
- Recreation, in country, 72; and workers, 347; outdoor, 380; and National Parks, 382; organizations for, 384
- Refrigeration and marketing, 138
- Relative, increase of wealth in U.S., 122
- Research, industrial, 225; of Department of Agriculture, 227
- Resources, of power energy in world, 204; warnings of exhaustion, 205
- Results of productions, 131
- Retailers, tendency of, 308
- Revolution, agricultural, 143
- Reward of effort, 235
- Rich, idleness of, 99; contributions of, 104
- Riches and women, 102
- Roads and agricultural marketing, 174, 175
- Rochdale Coöperatives, 526
- Roosevelt Dam, 151
- Rotor ship of Herr Flettner, 207
- Routine, deadening influence of, 89
- Rural communities, insanitary drainage in, 19, 20; dangers of soil pollution in, 20; and flies, 20; inadequacy of medical facilities in, 21; and household conveniences, 25; social life of, 29; household conveniences in, 186
- Rural education, 75, 193; effect of transportation, 76; and machinery on farms, 76
- Rural homes, equipment of, 25; inadequate screening of, 20
- Rural housing, inadequacy of, 18
- Rural life, poverty of, Edmund Wilson, 13; deprivations of, 14; struggle of, 15; social life of, 15; inadequate nourishment of, 16; contaminated drinking water, 16; housing of, 17, 18; woman's work, 23; marriage, 24; and motherhood, 24; child labor, 27; hardships of, 29; and coöperation, 169; consolidated schools, 171; improvements, 185; elimination of isolation, 188; education, 193; recreation, 195; and the radio, 197; literature of social problems, 197; self-study of, 198
- Rural poverty, and housework, 25; and running water, 25; and child labor, 28; self-perpetuation of, 34; hardships of, 36
- Rural, press, 194; recreation, 195;



- housing, 18; community centers, 196; culture, changes in, 196; family life, 26
- Russia, Soviet régime, 518; and socialism, 561
- Safety campaign and finger accidents, 242
- Sanitation, improvement on farms, 190
- Sankey Report on English Coal Mining Industry, 555
- Savings, volume in U.S., 116
- Schools, growth of, 387
- Scientific factory management, 279; contributions, 280
- Scout movement, 383
- Seasonal labor, 362
- Seasonable trades, and labor, 360
- Securities, volume in 1924, 116
- Seller, and taxes, 417
- Shale, oil-bearing, as source of fuel, 207
- Sherman Anti-Trust Act, 311, 312, 441
- Shipping of agricultural products, 178; in carload lots, 178
- Siemens-Rhein-Elbe-Schückery Union, 314
- Slave system, failure of, 229
- Smith, Adam, theory of, 4, 248; and revolutionary doctrines, 395; and individualism, 499
- Social policy and combination, 254
- Social, rural life, 29; problems of, on business system, 294; casualties, 427; income, 482; definition of, 495
- Socialism, principles of, 560; and government ownership, 560; private profits and wage system, 561; history of, 561; and attainment of goal, 564; in Russia, 565; advantages of pursuit of ideal, 567; in different countries and America, 566; practicability, 568; and culture and civilization, 569; guild, 572; defects of Marxian socialism, 571; guild, 576; obstacles to guild, 577; in Great Britain and U.S., 579; distributive aspect, 443
- Soil, exhaustion of, 135, 164; better use of, 142; formation of, 142; restoration, 144; artificial fertilization of, 144; fertility, need of maintaining, 164
- Sources of power, development, 200; classes of, 202; the sun, 202; fuel and water, 203; sunlight, 206; tides, 206; oil-bearing shale, 207
- Speculation in price changes, 408; function of, 409
- Specialization, in industry, 255; in manufacturing, 271
- Spencer, Herbert, 501
- Standardizing, agricultural products, 180
- Standards, of living, "fair minimum," of National Industrial Conference Board, 57; comfort, 58; raising, 63; Philadelphia health, 61; struggle to maintain, 86; raising, 107; of wealth, 5; of living, 6; of farm organization, 165
- State, public confidence in, 579
- State Wheat Board, Queensland and Australia, 183
- Statistics, and labor disputes, 520
- Steam, turbines, 212; piston engines, and development, 212
- Stinnes Konzern, method of operation of vertical trust, 314
- Stocks, of corporations, 293; classes of, 294
- Stone, for construction, 224
- Storage, and marketing of agricultural products, 177
- Sun, as source of power and energy, 202; utilizing energy of its light, 205
- Super-power system, 217
- Supply, control of, 406, 410
- Supreme Court, and government regulation, 316
- Survey of world power sources, 205
- Survival of fittest, theory, 501
- Syndicalism, plan of, 571; history, 572; policy, 573; in America, 574
- Tariff, and discrimination against social groups, 417
- Tax, income, 438
- Taylor, Frederick, development of functional type of manufacturing management, 278; and "Taylor System," 279
- Temperatures, production of, 221
- Tide, as source of energy, 206; tide power plants, 206
- Tools, essential for a farm, 157; development of, 199
- Tractors, on the farm, 159, 189; replace horses, 159; advantages over horses, 159
- Transportation, farmers' problem, 174, 175; costs, 176; by water, 177; by truck and horse, 203
- Trend of population, 124, 185

- Turnover, investment, 425  
 Types of factory management, military, 275; functional, 276; advantages of, 278  
 Types of manufacturing, assembling, 271; continuous, 273
- Unemployment, of unskilled labor, 45  
 Unions, craft and industrial, 510; right to organize, 516  
 United States, per capita wealth of, 12; maternal mortality rate of, 22; Dept. of Agriculture, and control of pests and diseases, 154; economic position in the world, 117; national wealth of, 121  
 United States Dept. of Agriculture, surveys, 165; control of pests and diseases, 154; score card for selecting a farm, 168; survey of coöperative marketing, 182; aid to farmers' marketing policy, 184; survey of rural life, 191  
 United States Geological Survey, soil surveys, 165  
 Urban congestion, reducing, 369; change in diet, 377  
 Urban life, in tenement district, 50; social, 84; women's work, 85  
 Urban poverty, 37; handicaps of, 38; effect of low-grade work, 39; among industrial workers, 44  
 Uses, regional and national, 485  
 Utilitarianism, 397  
 Utopians, 562
- Values, industrial increase of, 122; agricultural, 122  
 Veblen, Thorstein, 291  
 Veterinary service, coöperative, 171  
 Vocational education, 386  
 Voluntary productivity, 330  
 De Vries, scientific breeding, 145
- Wage, workers increase in numbers, 356; legislation, 366  
 Wages, and health, 47; and infant mortality, 47; below comfort standard, 58; in various industries, 61, 62, 63; compared to Philadelphia Standard, 62; real, in U.S., 1820-1920, 119; system and socialism, 561  
 Washington, D.C., city plan, 373  
 Water, in houses of rural communities, 192  
 Water power, potential, in world, 206  
 Water transportation, and the farmer, 177  
 Wealth, aim of, 3; standard of, 5; use of, 6; per capita in United States, 12; of richest families in America, 98; and older and younger generations, 102; and women, 102; raw materials of, 109; forms of, 116; growth in the world, 118; of United States, 121; our relative increase, 122; index numbers of, 122; forms of, 121; distribution of, 396; government reapportionment, 400; forms of, 402; unearned, 411; use of, 412; and public policy, 431; redistribution by charity, 433; methods of reapportionment, 434; government apportionment, 436; and the income tax, 436  
 Weighing location factors for industry, 269  
 Welding, 221  
 Well-being, levels of, 56  
 Wheat prices, in Queensland, Australia, and U.S., 183  
 Wilson, President, industrial philosophy, 315  
 Woman's work, in rural life, 23, 26; in occupations, 86; effect of modern conveniences, 85; improvement, 355; in industry, 351  
 Women, activities of wealthy, 103, 349; number gainfully employed, 349; occupations employing, 350  
 Women, and children, in industry, 351; and industrial change, 473  
 Work day, shortening, 357  
 Work, men's, 86; rich men's, 99; improvement in hours in rural life, 185; satisfaction in, 231; kinds of, 343; relief from heavy, monotonous, 345; machine, 346; monotony of office, 346; and development of sports, 347; and reorganization of industrial plants, 348; its place in life, 349  
 Workers, and satisfaction in work, 231; identification with industry, 236; reward of effort, 235; and social approval of efforts, 239; safeguarding health and tenure of, 241; and reorganization of work, 343; and recreation, 347; increase of numbers in industry, 356; and hours of work in city trades, 356; and ownership, 421; types in steel industry, 511  
 Working class, rise of, 500

- Working week, increasing length, 256
- Workmen's compensation laws, 379; . states adopting, 379
- World Conference on Power, 205
- Yield, per acre in U.S., 123; in decade of the Civil War, 123; Europe and U.S., 126; increase of, 126
- Youth, and future economic advance, 594

1126-10B  
70T









132560✓

Iowa State University Library

Ames, Iowa 50010



HC106  
T818a2

ISULB RARY



3 2792 019 561 780

WITHDRAWN  
IOWA STATE UNIVERSITY  
LIBRARY

